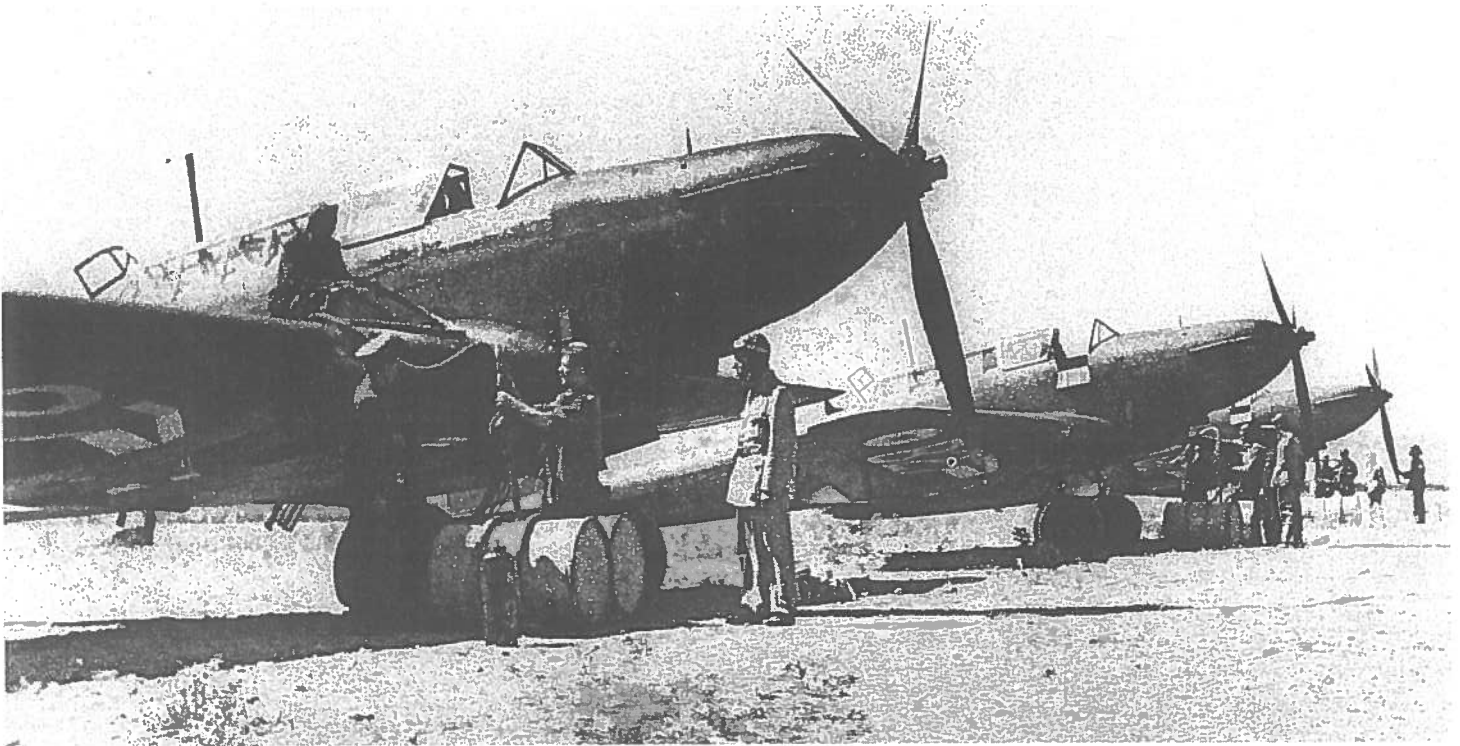


small air forces observer

vol. 26 no. 3 (103)
October 2002

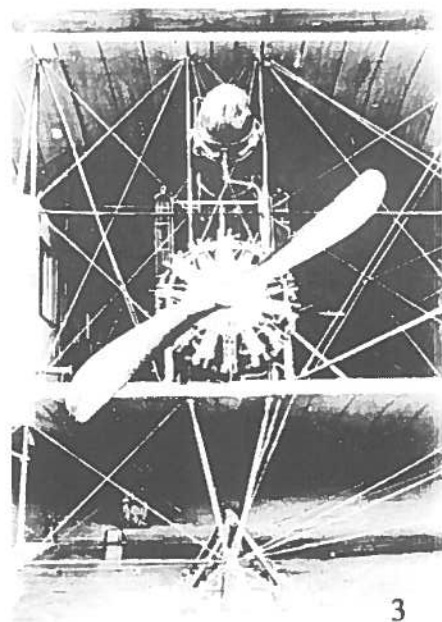
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Imperial Russian Heavy Bombers
Ecuadoran Air Force Cessna 150
Argentine Antarctic Aviation
Ecuadoran Army Piper PA-18
Uruguayan T-34 Mentor
Latin American Ducks
Greek Battles

vol. 26 no. 3 (103)

October 2002



The Newsletter of the Small Air Forces Clearing House
E-mail: safoc@redshift.com

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[illegible]

EDITORIAL COMMENTS: I am having trouble getting my new word processing program to talk to my old desk-top publishing program; they seem to want to drop all quotation marks and apostrophes. I've tried to replace these in the final version, but I probably missed a few. Please excuse these omissions and I'll try to have this corrected by the next issue.

3. Publication Title		14. Issue Dates for Circulation Data Report	
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Total Number of Copies (first press only)		588	579
1. Paid and/or Requested Circulation	(1C) Paid and/or Requested Circulation (See Instructions on Page 3B41, include advertiser's proof and exchange orders)	404	401
	(2C) Paid and/or Requested Circulation Based on Form 3B41 (Include advertiser's proof and exchange orders)	0	0
	(3C) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution	0	0
	(4C) Other Classes Mailed Through the USPS	110	103
	Total Paid and/or Requested Circulation (Sum of 1C, 2C, 3C, and 4C)	514	504
	(5C) Outside-County as Listed on Page 3B41	0	0
2. Free or Nominal Rate Distribution (See Instructions on Page 3B41)	(1N) In-County as Listed on Page 3B41	0	0
	(2N) Outside-County as Listed on Page 3B41	0	0
	(3N) Other Classes Mailed Through the USPS	0	0
Free Distribution Outside the Mail (Carriers or other means)		0	0
Total Free Distribution (Sum of 1N, 2N, and 3N)		0	0
Total Distribution (Sum of 1C, 2C, 3C, 4C, 5C, and 6C)		514	504
Copies not Distributed		74	75
Total (Sum of 1C, 2C, 3C, 4C, 5C, and 6C)		588	579
Percent Paid and/or Requested Circulation (Sum, divided by 1C, times 100)		100	100
7. Signature and Title of Editor, Publisher, Business Manager, or Owner		8. Publication Not Required, Check	
<input checked="" type="checkbox"/> Publication required to be printed in this <u>Country</u> - <u>USA</u>		<input type="checkbox"/> Publication not required, Check	
Signature and Title of Editor, Publisher, Business Manager, or Owner <i>E. Sanders</i> Editor		Date: 28/9/1992	

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Designate the single author or security holder in a volume, including in Items 10 and 11 the name of the person or corporation for whom the material is written. Also include the names and addresses of individuals who are contributors who own or hold 1 percent or more of the total capital, mortgages, or other securities of the publishing corporation. In Item 11, item, check the box. Use identical checks if more space is required.

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In Item 16, indicate the date of the issue in which the Statement of Ownership will be published.

Item 17 may be omitted.

Form to file or publish a statement of ownership only used in conjunction of Periodicals authorization.

Form 3526a, October 1986 amended

of the book 'The Brazilian Air Force in World War II: Mediterranean Theatre of Operations'. Some time ago, one of our readers asked me to find a copy of this book for him, but at that time I couldn't find one. Unfortunately, with the recent change-over in my computer system, I seem to have lost that reader's name. If you are that reader, please let me know if you still need a copy of this book. I've put it aside for you. Contact me at the Editorial Office either by snail mail or by e-mail saf@redshift.com.

AUSTRALIA

AUSTRALIAN PLASTIC MODELLERS ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues sea mail A\$27; air mail A\$30).
2-02 (28 pages) "Rodriguez PT50 Hydrofoil" 8 pages on scratch building a hydrofoil boat including 15 photos. "Professor Doctor Claudius Dornier and his Flying Boats" 5 pages on building matchbox Do 18 including 4 photos of the model and 3 side-view drawings. "Odd Bods and Invaders" 3 pages on the USAAF A-20 'Steak & Eggs' including 3 photos, 2 side-view drawings, and drawings of the 3rd Bomb Group insignia and aircraft's name. "The Whippet" 4 pages with 5 photos of the Whippet in the Bovington Tank Museum and 4 side-view drawings. "A Researcher's Dilemma: Modelling at One to One Scale" 5 pages on researching the color and markings of an RAAF Mustang including a 4-view scale drawing.
3-02 (28 pages) Photos: RAAF/RAN Sabre (50, Mirage III (3), Tracker (4), Venom, Gannet (2), Seagull, & Sycamore. "Dick Dasterly's Mean Machine from Wacky Racers" six pages on scratch-building a 'funny' machine but with lots of good tips for aircraft modelers. "Tempest MK II" one page with 3 side-view drawings (RAF, India, & Pakistan). "Transports in the Balkans 1943-45" 5 pages including 8 side-view drawings [Italian Cant Z.1007bis, RAF C-47 (2), Luftwaffe DFS 230, Ju 87B, LeO 451T, & Ju 52/3m (2)]. "Air America Hughes 500" including 2 side-view drawings. "Skyraiders and Skyknight" one page with 3 side-view drawings. "Early Eagles: The F-15A" one page with 4 side-view drawings. "FW-190 and Bf109's" one page with 3 side-view drawings (Romanian Fw 190F, Bulgarian Bf 109G, & Croatian Bf 109G).

AUSTRIA

OFH NACHRICHTEN (Oesterreichische Flugzug Historiker, Pfenninggldf. 18/214, A-1160 Wien. Write for free sample.)
OFH 2/02 (36 pages) "Albatros D-II" 9 pages including 7 photos, a table of technical data, and 5 side-view drawings. "Flik 20" 3 pages including 2 photos and 3 side-view drawings (Brandenburg C.I.).

BRAZIL

REVISTA (IPMS Brazil, Rua Lucidio Lago, 457/206 Meier - Rio de Janeiro, CEP 20.780-020) E-mail: antoniolinhares@bol.com.br
#103 Setembro 2002 (16 pages) "Um 'Curuoso' T-6 Hidro/Hibrido's one page with 3-view drawings of South Korean float T-6. "Esquadrao 193: The Brazilian Bellows Typhoon Squadron" 4 pages including side-, top, and bottom view drawings 'DP-D' (RAF) and sketches of interior and exterior details. "Stinson V-105" 2 pages including 3-view drawing, side-view drawings and one photo of the aircraft in Brazilian Navy markings. "Models 1:72 de Meteor F8" 2 pages including list of F8 kits (including a new one from Commando5 in Brazil) and 3 side- and a top-view drawings of Brazilian Meteor F8.

ENGLAND

SWEDISH AIRFORCE SIG (Ted Burnett, 19 Tintagel Close, Parkside Grange, Cramlington, Northumberland, England NE23 0NZ. Subscription £4.00 UK, 10 Euros, \$12.00 USA).
#41 Summer 2002 (15 pages). Ted is cutting back on his commitments to the SIG and this is reflected in a smaller newsletter, but with a corresponding

decrease in the subscription cost. However, on the bases of this issue, this does not mean any reduction in quality. In fact, this issue is the best newsletter I've ever seen, bar none. Besides the usual news of new kits and decals, there is a great 9-page article on HKP 4 Colours and Markings in Swedish Service with a detailed description of the evolution of markings (including interior colors) supplemented with 6 color photos and 10 side-view drawings. An article on building the Airfix and Fujimi kits is promised for the next issue. This excellent issue concludes with a one-page review of the 1/72-scale resin kit of the J6B Jaktfalk and a reprint of one side of the kit's instruction sheet with 7 side-view drawings of Jaktflaks in Swedish, Norwegian, & Finnish markings.

THE CATALINA NEWS (Val Thomas, The Catalina Society, Duxford Airfield, Cambs, CB2 3QR, England. One year £15. Web Site: www.catalina.org.uk. E-Mail: david.legg@lineone.net)
#51 September 2002 (24 pages). "Catalina Engine Problems" 2 pages including one photo. "The British Pensacola Veterans: Pt.1" 3 pages including 3 photos. "Wanaka 2002" a one-page review of the New Zealand Air Show and the participation of Catalina ZK-PBY including 2 photos. Plus, lots of reader input in the usual departments: "Cat Contact Column", "Feedback", "Cat Letters", "Review Column", "World Catalina News", and "Catalina Book Update". The total number of photos of Catalinas in this issue is 22.

PLASTIC KIT CONSTRUCTOR (PAMAG Publications Ltd., Riverdale, 89 Graham Road, Sheffield, S10 3GP; 4 issues £18.00. (North American subscription agent: Wise Owl Publications, 1926 S. Pacific Coast Highway, Suite 204, Redondo Beach, CA 90277. E-mail: wiseowl@sprintmail.com. Web Site: www.wiseowlmagazines.com).
#67 Summer 2002 (36 pages) "MPM 1:72 scale Douglas DC-2" one-page kit review including 4 photos of model finished as 'OK-AIB'. "Airline Modelling" 2 pages on modeling the Airbus A319, Tupolev Tu-154, Ilyushin IL-76, & Airbus 310 including 2 photos. "Making sows ears out of silk purses" one page about kit bashing including 4 photos of completed models (Fokker C-15, Bellanca XSE-2, Curtiss XSB2C-1, and Sikorsky XSS-2.) "Curtiss XF-13C" a one-page 4-view scale drawing. "Aeroclubs 1:48 scale E.E. Canberra B(1)6" 4-page review with 22 photos of the model in various stages of construction. "Avia B-534 in service with the Bulgarian Air Force" 3 pages including photos and drawings of color schemes and details. "Fiat CR-25bis" 6 pages on building the Airmodel kit including photos, a 1/72-scale 3-view drawing, and drawings of the camouflage scheme. "A colourful P-47 in 1:48 scale" 3 pages including 10 photos of the model. "Bell's Airacuda" 4 pages on building the Rareplane kit including 6 photos and a 3-view scale drawing. "Ilyushin IL-4" 2-page review of the Revell kit including 2 photos. Shorter reviews include: Azur's IMAM Ro.37; MPM's Vultee Vigilant; Eduard's Albatros D.II(LVG); and Roden's Fokker D VII, PKZ-2 helicopter & Gotha G.IV.

FINLAND

IPMS-MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues \$20.00, no check accepted due to the high redemption costs). Now with captions in English.

#141, 1/2002 (24 Pages) "Messerschmitt 109E-3" 3 pages including sketches of interior and exterior details and a small drawing showing the markings of Swiss 'J-311'.

FRANCE

AVIONS: Toute l'Aéronautique et son Histoire (LELA PRESSE, 29 rue Paul Bert, 62230 Outreau, France. 420F for 12 issues).

#112 Juillet 2002 (84 pages) Special issue "Les AS de la Seconde Guerre. Marcel Lefevre: un hero du Normandie" 11 pages including 26 photos, a color cover painting, and 4 color side-view drawings (Spitfire, Yak-1M, & Yak-9). "Saburo Sakai: Les legende du pacifique" 10 pages including 14 photos and 5 color side-view drawings (A5M & A6M). "Tom Pattle: Le mystere de la RAF" 8 pages including 13 photos and a color side-view drawings (Gloster Gladiator). "Walter Nowotny: Le premier a 250 victories!" 11 pages including 24 photos and 8 color side-view drawings (Bf 109, Fw 190, & Me 262). "Hemmo Leeino: Un as finlandais sur un avion francais" 9 pages including 19 photos and 2 color side-view drawings (MS 406 & Bf 109). "Francis Gabreski: Le roi du Thunderbolt" 9 pages including 21 photos and 4 color side-view drawings (P-47 & F-86). "Adriano Visconti: Jusqu'au bout avec l'ANR" 9 pages including 14 photos and 5 color side-view drawings (Ba.65, MC.200, MC.202, f109, & MC.205). "Ion Dobran: un fakira la guerre" 10 pages including 19 photos and 5 color side-view drawings (IAR 80 & Bf 109).

#113 Aout 2002. (64 pages) "Retros du mois" one page with 2 photos (Hungarian Fw 56), "Alexandre Pokrychkin" 15 pages on Soviet 'Ace' including 14 photos, color cover painting, and a color side-view drawings (MiG-3). "Breguet 270" 10 pages including 25 photos. "L'URSS dans la Guerre d'Hiver (1939-1940)" 9 pages including 20 photos (Soviet & Finnish), tables of Soviet aircraft losses, and 4 color side-view drawings (I-152, I-16, Fokker D.XXI). "Bombes sur le Maroc: 1912-1914" 6 pages including 10 photos. "Le Koollhoven FK-51 11 pages including 18 photos of the FK-51 in the Dutch East Indies, a color 3-view drawing, and 3 pages of 1/72-scale multi-view drawings, [Ed: One of the photos is the inspiration of a great diorama; it shows a line-up of Fk-51 on a grass landing field with a pair of oxen pulling a grass mower.] [Ed: The last photo in this article show an airfield (probably Andir) after its capture by the Japanese. An Fk-51 is in the foreground, but in the background is an aircraft I cannot identify. It's a single-engine low-wing monoplane with a large tricolor fin flash and the letter 'P' on the fuselage. Can anyone identify this aircraft?]" "Le CM 175 'Zephyr': Conversions ou 1/48eme du Fouga Magister" 5 pages including 7 photos of the completed model and 8 photos of details of the real thing.

#114 Septembre 2002 (64 pages) "Guerre sur le Havre" 8 pages including 18 photos and color cover painting. "Alexandre Pokrychkin" 8 pages including victory list, 14 photos, 2 color paintings, and a color side-view drawing (P-39). "Le Manfred Weiss WM 21 Solyum" 11 pages including 21 photos, 4-view color drawings, and two scale 3-view drawings (WM 16 Budapest & WM 23 Solyum). "Le Breguet 270 et sa descendance: L'entre-deux guerres" 14 pages including 35 photos, 2-page cutaway drawing, and 2 color side- and one top-view drawings. "1912-1914: Bombes sur le Maroc" six pages including 9 photos. "Des MiG-15 pour Egypt" 10 pages including 24 photos (mostly MiGs but also an Egyptian AF Beech 18 & C-46), and a color

3-view drawing (MiG-15).

#115 Octobre 2002 (64 pages) "Retros de mois" one page with 2 photos of Latham flying boats. "Du Ju 88 au Me 262: Franz Gapp, un as pas comme les autres" 11 pages including 34 photos and one color side-view drawing (Me 262). "Le Breguet 270: La 'Drole de Guerre' et la campagne de mai-juin 1940" 14 pages including 24 photos, 6 color side- and one color top-view drawings, a 3 pages 1/72-scale multi-view drawing, and a 2-page list of all individual aircraft. "La Lufthansa Durant la seconde guerre mondiale: Part 4 - 1942" 12 pages including 26 photos. "Des avions francais en Tchecoslovaquie (4)" 6 pages including 18 photos (Spads). "As hongrois 39/45: Gyorgy Debrody, les dents du Puma!" 9 pages including 26 photos and 4 color side-view drawings (Bf 109F & G).

ITALY

AERO FAN Storia di Italiane. Italian-English text. (Giorgio Apostolo Editore, Via Ampere 49, 20131 Milano, Italy.) 4 issues L 80,000.

#81 Apr.-Gui. 2002 (68 pages) "A Reconnaissance Biplane for Italian Cruisers" 19 pages including 18 photos, two 3-view drawings and 6 pages of drawings of the aircraft and of their stowage arrangements on the cruisers (Macchi M.40 and Piaggio P.6). "A Gentleman Pilot: Max Capelli flight tested hundreds of aircraft at SIAI Machetti from 1946 to 1945" 13 pages including 20 photos (S.66, S.79, S.82, S.84, & SM.87). "A Successful Action by 13o Gruppo s Macchi C.200: The sinking of destroyer HMS Zulu as recalled by a protagonist" 8 pages including 7 photos (C.200). "An Adventure at Sea: The last mission of sottotenente Mayer in the eastern Mediterranean" 9 pages including 18 photos (Ro.41, BR.20, S.79, & SM.84)

JP-4 Mensile di Aeronautica (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).

Giugno 2002 (100 Pages) Color photos: South Korean UH-60 and Bahrain VIP Avro RJ 85. "Gli 'occhi' e gli 'orecchi' della flotta francese" including 12 photos French E-2 and one each of E-2 in the markings of Singapore and Japan. "Dai Canberra agli Zlin" 3 pages including 8 photos (Peruvian Canberra, Zlin 542, & Cessna T-41).

Luglio 2002. (100 pages) Color photos: Brazilian Boeing 707 '2404', Greek Raytheon T-6A Texan II. "Guardiani del Mar Nero" 4 pages including 10 photos of Turkish F-16. I 'Favolosi' del 20o Gruppo" 6 pages including 14 photos of Italian F-104.

Agosto 2002 (100 pages) "Un Tornado 'virtualmente' perfetto" 5 pages on Italian Tornados including 12 photos. "Dia da Caca" 4 pages including 10 photos of Brazilian AF aircraft (F-5E, AMX, AT-27, AT-26, & Mirage III).

NETHERLANDS

MODELBOUW IN PLASTIC (IPMS-Nederland, PO Box 40082, NL-8016 DB Zwolle).

3/2002 (32 pages) "De Boeing C-97C Stratofreighter" 6 pages including 6 photos of the completed model. "De F-86K Sabre(1)" 4 pages including 2 color and 5 b&w photos, and one color

and one b&w side-view drawings of Dutch 86Ks. "De Havilland DH 98 Mosquito NF36 nachtjager" 4 pages on building the Airfix 1/48-scale kit including 6 b&w and one color photos of the model. "Slagschip US Missouri BB63" 5 pages on building the 1/350-scale kit including 8 photos of the model.

SPAIN

REVISTA ESPANOLA DE HISTORIA MILITAR (Carlos Fresno Crespo, Alcaniz Fresno's S.A., C/Cromo 18-20, Poligono Industrial San Cristobal, 47012 Valladolid) 800 Pts.

#23 Mayo 2002 (58 pages) "La defense aerea de Canarias durante la II Guerra Mundial" (Part 1) 7 pages including 10 photos and one color side-view drawing (CR.32). "Antonio Garcia Cano: Piloto en Espana y en la URSS" 4 pages. "El crucero Carlos V" 8 pages including 8 photos and a color side-view drawing of the ship. "El ataque Aleman a los paises Bajos: Las planes germanas" 14 pages on the German invasion of Belgium including 13 photos, 2 maps, and 10 color side-view drawings (Luftwaffe: Do 17, He 11, Ju 88; Belgian: CR.32, Hurricane, Firefly, & Gladiator). Also, color side-view drawings of one German tank, one Belgian tank (T.15), and one Belgian Marmon-Herrington armored car. The series "Los Blindados en la Guerra de Espana (1936-1939)" continues with another 16-page insert which includes 31 photos and 5 color side-view drawings (Lancia 1Z, Pamplona #3, and Blindado #9). These vehicles are getting weirder with every installment. The poster inserts are: Carro Veloce CV-3/35 "Breda"; Obus de 306/17 G.Mod.17 "Garrone"; Tractor Semioruga Krauss Maffei KM m9 (SDKFZ 7); and Carro de Combate M-60 A-3 TTS.

#25/26 Julio-Agosto 2002 (58 Pages) "Ifni, cien dias de guerra" 8 pages including 2 maps, 8 photos, and 3 color side-view drawings [CASA 2.111 (He 111), C-47, & Ju 52]. "Lucha en el cielo de Espana. El otono de 1937" 5 pages including 4 photos (Ju 52, R-Z, & He 46), diary of Escuadra se Caza #11 (1.10.37 al 9.10.37), and 2 color side-view drawings (Ju 52 & I-16). "Un gran vuelo transatlantico: El Raid aereo Cuba-Espana de 1936" 4 pages including a map, 6 photos, and one color side-view drawing (Lockheed Sirius 8A). "Produccion de material militar durante la Guerra Civil Espanola" 7 pages including 15 photos of non-aviation vehicles. "La rendicion de Belgica" 13 pages including a map, 18 photos (no aircraft), and 6 color side-view drawings (Sd.Kfz 263, Vickers T.13, Renault AGG-1, tractor C.47, Panhard, & PaKpfw auf IIIIE). The series "Los Blindados en la Guerra de Espana (1936-1939)" continues with another 16-page insert which includes 24 photos and one color side-view drawing (Camion blindado Field n 2). These vehicles are getting weirder with every installment. My favorite this time is a truck with a monstrous horn loudspeaker for broadcasting propaganda. [Ed: This would be a great way of getting back at the idiots who drive around with their car radios booming.] The poster inserts are: Lanzaminas Erhardt de 76 mm; Panzerkampfwagen I Ausf A (Sd Kfz 101) (La.S. Vs Kfz 617); Camion Blindado C-15TA 'Trumphy'; Camion Blindado C-15TA 'Trumphy'

(modificado).

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$35.00 USA or \$40.00 overseas).

#177 Aug 2002 (146 pages) "Powered Flight: A Russian Endeavour of the 1880 s" (Part II) 7 pages. "First to Fly: North Carolina and the Beginnings of Aviation. Chapter 4: As the Surfmens Tell It" 15 pages. "The Five First Flights" 14 pages including 6 photos. "Icarus' Cry: Henri Coanda, Pioneer of Applied Aerodynamics, Creator of Reactive Aviation, and Polyvalent Personality of Worldwide Technics" 5 pages including one photo and a 3-view drawing of his 'jet' powered aircraft. "A Visit with Henri Coanda (1965)" 7 pages including 2 photos and a 3-view scale drawing. "Goliescu" 7 pages including 3 photos and 2 pages of drawings of his unique gull-wing aircraft. "Flying the LVG" 7 pages including 3 photos. "How to Tell a British-Built Spad 7 from a French-Built Spad 7" 3 pages. "Times Tarmac" 4 pages with 11 photos. "Lohner Type H" one page scale 3-view drawing. And all the usual departments: "Aircraft", "Pilot Report", "Identification X", "Museums/Organizations", "Drawings", "Historiography", "Models", "Letters", "Publications", and "Wants & Disposals".

SKYWAYS (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$35.00 USA or \$40.00 overseas.).

#63 Jul. 2002 (84 pages) "The Mercury Aerobat and Bauman/Mercury B-100" 12 pages including 10 photos and 4 pages of 3-view scale drawings. "My Life in Aviation" 8 pages including 12 photos (Burgess-Dunne, Curtiss N-9H, F-5L, & F-6L; Vought UO-1 & O2U-1; NAF TG-5, and Boeing NB-2; mostly from a private collection). "The 1934 Pan-American Air Races" 7 pages including 14 photos. "ID UNK" 4 pages including 7 photos. "The Waco Cootie Reproduction" 5 pages including 5 photos and a 3-view scale drawing. "The Curtiss-Wright 22 Falcon" (Part 1) 18 pages including 18 photos and two 3-view scale drawings. "Curtiss-Wright SNC-1 Navy Trainer" 4 pages including 7 photos

ESM 72 (Model-Aire International, PO Box 159, Olema, CA 94950. E-mail: maiesm72@aol.com. Web site: members.aol/Maiesm72/maiwebpg.html.) Quarterly. \$25.00 for four-issue volume. \$30.00 outside the USA. Back issues available at same price per volume.

Vol 5, No 4, (52 pages) "Floatplanes, Flying Boats & Seaplanes" 21 pages. "Aircraft Updates" 11 pages. "Vehicle Updates" 6 pages (USA). And, 19 pages of miscellaneous updates: "Vehicles", "Ships & Boats", "Rockets, Missiles & Spacecraft", "Artillery Updates", "Vehicle Parts & Accessories", "Figures", "Structures", "Terrain and Dioramas", "Railway Locomotives & Rolling Stock", "Aircraft Conversions", "Infantry Accessories", "Aircraft Canopies & Turrets", "Gliders & Sailplanes", "Aircraft Interior Details", "Helicopters, Autogyros & VTOL", "Engine, Cowling and Props", "Training Aircraft" and, "Landing Gear".

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"A little correction to SAFO No 102, page 102: the Fw 44 of the Romanian Air Force is shown in the color scheme used after August 1944. This is be-

cause it has a white band and cockade." Matthias Rothe SAFCH #865), Kilstetter Strasse 23a, 14167 Berlin, Germany.

The Hellenic Battles

Stamatis J. Andreou

In 1938, with only obsolete Potez 25A2s and Breguet 19A2/B2s in the inventory while mounting international tension dictated an urgent need to modernize and expand, the *Elliniki Vassiliki Aeroporia* (EVA = Hellenic Royal Air Force) placed an order with Fairey Aviation for twelve Battle B.II light bombers.

The Battle prototype had flown in March 1936, the first production machine had entered service in April 1937, and by the end of 1938 fourteen RAF squadrons had converted to, or had been formed on, Battles.

A rather elegant, single-engine, low-wing monoplane with a wingspan of 54 ft 0 in (16.45 metres) that featured light alloy and stressed skin structure throughout, the Battle had been designed to be crewed by a pilot and rear gunner/radio operator, but the Air Ministry had subsequently decided a navigator/bomb aimer was also needed. This three-man crew was accommodated in a single long "glasshouse", the bomb aimer having to lie prone to use his sight. A bomb load usually comprising four 250 lb (113.5 kg) bombs was carried internally in bays in each wing root, hydraulically operated crutches swinging the bombs clear in diving attacks. Another 500 lb (227 kg) of bombs could be carried on optional external racks. The defensive armament consisted of a single 0.303 in (7.7 mm) Browning machine gun in the starboard wing and a pillar mounted Vickers K of the same calibre in the rear cockpit.

With a crew of two and powered by a 1030 hp Rolls-Royce Merlin II that drove a De Havilland three-blade, variable pitch propeller 3.81 metres in diameter, the Battle Mk I achieved, at 15,000 ft (4,600 metres), a maximum speed of 252 mph (406 km/h) and a cruising speed of 200 mph (322 km/h). Climb time to 15,000 ft was 16.2 minutes, the service ceiling 26,000 ft (8,000 metres), and the range 1,065 miles (1,714 km) at 200 mph with a 1420 lb (644 kg) bomb load. Tests showed that, in RAF service and with a crew of three, the Battle only attained a maximum speed of 241 mph (388 km/h) at 13,000 ft (4,000 metres). It was, as one author notes, "destined from the outset to be no more than mediocre".

The EVA order for Battles was not met promptly. The despatch of nine Battles to Greece was at first cancelled, but the 12 ordered were eventually released by the RAF at the end of 1939. By this time the loss of four out of five Battles of the RAF's 150 Squadron intercepted in daylight over Saarbrücken on September 30, 1939, had shown that the aircraft was obsolescent, if not obsolete, even if it was obviously still far superior to a Potez 25A2 or Breguet Bre 19.

The 12 Fairey Battle B.IIs eventually delivered were powered by Merlin IIs with "kidney" exhausts. They arrived wearing the regular RAF camouflage scheme of the period: Dark Earth/Dark Green upper surfaces and Night (black) undersurfaces. The few photos available all show the upper surface colours applied in accordance with "Scheme A". They had radio masts and aerials, but no radios or intercommunication equipment, and none was ever fitted. Also, as noted in *Hellenic Wings* (1), they were delivered "lacking spares and armoury". (One source, according to Michel Ledet, states only 11 Battles were actually delivered, one having been lost when the ship carrying it was sunk. No

confirmation of this loss has been found in the official archives.)

The Battles were given the codes Vita 271 through Vita 282 (B271 through B2820 and used to form the 33 *Mira Vomvardismou* (33 Bomber Squadron) based at Thriassion (Elefsis). The RAF camouflage schemes were retained, blue/white/blue roundels being painted on the fuselage sides and under the wingtips. The codes were painted in black on the fuselage sides aft of the roundel and in large white characters under both wings with the tops of the characters towards the leading edge of the starboard wing and towards the trailing edge of the port wing.

In Action

On October 3, 1940, with an Italian invasion via the Greco-Albanian frontier growing more likely by the day, 33 *Mira* led by *Sminagos* (Flt Lt) A. Koudounis and with ten serviceable Battles relocated to Néa Anhialos (Volos) airfield.

On October 28, 1940, Italian forces finally invaded Greece and 33 *Mira* went into action. Each machine was crewed solely by a pilot and observer/gunner who also acted as bomb aimer. With no EVA fighters to spare, the Battles had to fly without escorts, attacking at low level and trying to protect one another. The story of the action seen by 33 *Mira* is sketchy, the weather often precluding flying by either side, and only the highlights are on record.

On November 5, when the Hellenic Army launched the initial counter-attack that stopped the Italian advance into Greece, five Battles bombing targets at Koritsa were intercepted by Italian fighters. *Arhisminias* (F/Sgt) N. Nikitidis, the observer/gunner in B280 piloted by *Sminagos* S. Baltatzis, shot down two Macchi C.200 fighters within five minutes. (The "Macchi" fighters were probably Fiat G.50s from the airfields at Tirana or Berat in Albania. The Macchi C.200s of 372^a *Squadriglia Autonomo CT* were at Brindisi, and no Macchi C.200 squadrons were moved to Albania until late February or early March 1941.)

On November 14, the day the Hellenic Army launched a general counter-attack, six Battles and three Blenheim IVs of 32 *Mira* were ordered to attack the two airfields at Koritsa. Four Battles took off at 0800 hrs and attacked the airfield north of Koritsa, destroying a Caproni Ca 133 transport and damaging three Fiat CR 42s and a Fiat CR 32. Two Battles and two of the Blenheims (the third having bogged down in mud) attacked the airfield south of Koritsa at 0945 hrs, reportedly destroying or damaging ten or more enemy aircraft. One Blenheim was hit by anti-aircraft fire and exploded, the other Blenheim, damaged by the explosion of the first, dropped its bombs on target and escaped back to Larissa although it was attacked by three Fiat CR 42s of 393^a *Squadriglia*. No Battles were lost.

Other Fiat CR 42s of 393^a *Squadriglia* spotted two Battles taking off from a forward airfield. One was attacked by *Sergente* Walter Rattichieri but, although badly damaged, regained its base at Néa Anhialos.

Later in the day, as related in *Hellenic Wings* (1), six Battles bombed the airfield at Argirokastron and reportedly destroyed 12 enemy aircraft. "According to the formation

leader, Flying Officer Sotirios Skantzikas, the bombers followed a low-flying approach to avoid detection, gaining altitude at the last minute, only to dive swiftly towards the target before the Italians could react".

On November 15, when the Battles B272, B274, B276 and B280 attacked targets at Koritsa, they were engaged over Mount Ivan by the Fiat CR 42 fighter escort of a Romeo 37 reconnaissance biplane of 72^o Gruppo OA. One of the Italian pilots, *Sottotenente* (2nd Lt) Maurizio Nicolis di Robilant, shot down two Battles and badly damaged a third. The first, B272 manned by *Arhisminias* G. Daraviggidis and *Sminias* (Cpl) Frangoulis Arnidis, crashed on Mount Ivan, the bodies of the crew were only found and recovered several days later. The second, B276, went down in flames with observer/gunner *Arhisminias* M. Kontidis already dead at his station. The pilot, *Iposminagos* (Flg Off) G. Hinaris, already badly burned, managed to bail out and then get out of the brook in which he landed; he spent six months in hospital and remained a POW until 1945. *Sminagos* D. Pitsikas managed to fly his damaged B274 back to Néa Anhialos, but his observer/gunner, *Arhisminias* Aristofanis Pappas, bled to death on the way back. Battle B280, again crewed by Baltatzis and Nikitidis, returned to base with the latter wounded and the aircraft riddled with bullet holes.

The officers and NCOs killed on November 15 were awarded the *Stavros Iptamenou* (Distinguished Flying Cross) and posthumously promoted. Kontidis was awarded the *Argiroun Aristion Andrias* (Silver Medal for Valour).

On November 2, the Battles of 33 *Mira* together with Potez 633B2s of 31 *Mira* and Blenheim IVs of 32 *Mira* bombed an 8 km-long enemy column retreating along the Koritsa-Maliki Lake-Pogradec road that Henschel Hs 126s of 3 *Mira* had been strafing since the previous day.

On January 12, 1941, *Antisminarhos* (Wg Cdr) M. Kinatos assumed command of 33 *Mira*. According to Hellenic Wings(1), only three Battles were serviceable.

On February 13, the Hellenic Army's II Corps launched an attack on Tepelene and Hellenic Wings(1) mentions that three Battles, together with three Potez 633B2s, bombed enemy positions "across the front". Two Fiat CR 42s of 150^o Gruppo on a weather reconnaissance mission spotted a Battle over Trebeshinj. They attacked and *Sottotenente* Ugo Drago and his wingman claimed to have shot it down.

At dawn on March 9 the Italians launched the *Primavera* (Spring) Offensive allegedly planned by Mussolini himself. In the course of the day a Battle, a Blenheim IV, an Avro 626 and six aircrew were lost by the EVA squadrons.

On March 11, five Battles that had bombed targets north of Mount Trebeshinj encountered Italian fighters over Nivitsa-Slatinia on the way back. *Sminagos* D. Pitsikas and *Episminagos* (Sqn Ldr) D. Stathakos in B275 opted to attack rather than attempt to evade, they were shot down over Nivitsa and both killed. Greek troops engaged in a fire fight to recover their bodies from the wreck of their aircraft. Stathakos, who had been acting as Deputy C.O. of 33 *Mira*, had disobeyed orders when he opted to fly a mission on B275. He and Pitsikas were posthumously awarded the *Hrisoun Aristion Andrias* (1940 Cross of Valour).

On March 12, according to Ledet(2), another Battle was shot down by Italian fighters.

On April 6, 1941, the Wehrmacht invaded Greece, and on

April 20 all the surviving Battles and Potez 633B2s, and most of the Blenheim IVs, of the EVA's bomber squadrons were destroyed at Tanagra airfield by strafing Luftwaffe Messerschmitt Bf 109Es of II. and III./JG 77.

Conclusion:

The crews of the Fairey Battles had helped to provide vital support for the Hellenic Army in its defence of Greek territory and subsequent successful offensive against superior Italian forces. But the Battles were underpowered and too slow, as well as lacking adequate manoeuvrability and defensive armament, and ground fire and far faster enemy fighters had taken a severe toll of both crews and aircraft, culminating in the destruction of the entire squadron.

References

- (1) Beldecos, Fl/Lt George J, HELLENIC WINGS - An Illustrated History of the Hellenic Air Force and its Precursors, 1908-1941.
- (2) Ledet, Michel, 1940-1941: L'aviation grecque au combat, AVIONS Nos. 44, 45 and 46.
- (3) Ledet, Michel, La Guerre en Grece (Marita 2eme partie), Batailles Aeriennes No. 15.
- (4) Shores, C. & Cull, B. with Malizia, N., Air War for Yugoslavia, Greece and Crete, 1940/41.

Author's notes

The Fairey Battles of 33 *Mira* were active in support of Greek forces from October 28, 1940 until the last of them were destroyed on April 20, 1941, but the record of the sorties they flew or how some were always kept serviceable and repaired after major combat damage despite the lack of spare parts is very sketchy. Any additional information or photos readers could provide would therefore be very welcome, whether in the form of a letter to the editor or a supplementary article for publication.

The Model

No currently available kit allows construction of a really accurate model of a Fairey Battle, whether in 1/48th or 1/72nd scale. Corrections involving major or lesser modification of kit parts are indicated in each case, and it is up to the individual modeller to decide just how much effort and time he or she wishes to invest.

Critics of the recently-released 1/72nd-scale MPM kit, which seems to be a scaled down version of the Classic Airframes 1/48th-scale kit, say the nose and cowling are too slim and tapered, the wings and tailplane inaccurate in plan-form, and the canopy not too accurate. Nonetheless, the MPM kit is still to be preferred to the old Airfix (SK Models and Bilek) kit with its lack of interior detail and many faults that are difficult to correct.

Whichever kit and scale are selected, it is advisable to consult a few references such as Air International of March 1961 (history and cutaway drawing), Scale Aircraft Modelling 9/1 of October 1986 and 22/2 of April 2000 (1/72nd-scale drawings, side views, etc.), Scale Aviation Modeller International 7/6 of June 2001 (1/72nd-scale drawings, profiles, etc.), and Batailles Aeriennes No. 15 (photos and profile of EVA Battles).

The 1/72nd-scale MPM kit comprises 49 parts injection

moulded in light-grey polystyrene and three in clear plastic, plus 30 parts cleanly cast in resin. It is a pretty good overall, but it does exhibit a few faults in addition to those noted by critics: The fuselage is nearly 4.0 mm too short, the fin/rudder assembly is not offset to starboard, the pilot's seat adjustment lever is on the left instead of the right, the main-gear retraction jacks are incorrect, the gun in the starboard wing has been overlooked, the mounting of the rear gun has been overly simplified, and a couple of outer details are missing. It is also a pity that the canopy has been moulded in one piece and obscures much cockpit detail, and that the bomb and flare bays have been moulded closed. In addition, the painting instructions are misleading in parts.

That said, the kit can be made up as an EVA Battle following the assembly sequence shown in the instruction sheet except for the following (numbers indicate kit parts; numbers preceded by an "H", Humbrol enamels).

Fuselage: Discard 52 (no radio installed). Attach 45 to the starboard side of 42. Paint 44 and the consoles in both cockpits with H85. Paint 42 with H56, the backrest with H62, and the seatbelts with H72. Note that the interiors of Battles, including the wings, were painted with Cerrux MP4, a khaki-green similar to FS 34258, for which the instruction sheet advises using H158, a colour that has been deleted from the Humbrol range. Humbrol now suggest using a mix, 26 x H99 + 21 x H101 + 15 x H34 + 15 x H73, but Xtracolor X120 is the simpler, and better, choice if available. Paint the upper surface of 10 (intercockpit decking) with H29, and use rectangles of black decal sheet to simulate the windows of the navigator/bomb aimer's station. If the rear gunner's section of the canopy is to be separated from the main part (58) and fixed in the open position, cut away the disk on 49 and scratchbuild a more realistic mounting for 48. Note that 30 should be longer and protrude into 58, and that there should be an ID light 2.0 mm aft of the triple crash pylon behind the front cockpit. (Caution: The Battle canopy from Falcon set No.FCV 008 may not fit the MPM kit.) Mount a circular sight behind the pilot's windshield and a bead sight on the engine cowling (see instruction sheet side views). Attach a venturi tube under and in front of the windshield on the port side.

Wings: Drill a hole in the leading edge of the starboard wing 2.0 mm inboard of the landing light and insert a gun "muzzle". If required, open up the four bomb bays, box them in, make new doors from thin plastic sheet, and insert the bombs from the Airfix kit. (The smaller doors inboard of the bomb bays are the flare bays.)

Landing Gear: Discard 29 (four parts) and either substitute the parts from the Airfix kit or scratchbuild four new triple jacks from thin plastic rod. Correct 17 (two parts) with filler and masks, the outer wheel centres should be only 5.0 mm in diameter in 1/72nd scale.

Painting: The available photos of EVA Battles mainly show destroyed machines, but they indicate that Dark Earth and Dark Green were applied in accordance with Scheme A. The middle and rear lower side windows of the gunner's cockpit were painted over. Use H29 and H30, together with H33 for the undersurfaces. The propeller blades should be painted H33 with H24 tips, the propeller hub H56.

Decals: The medium blue/white/medium blue roundels for the fuselage should be 11.0 mm in diameter; those under the wings, 12.0 mm. They can be applied using "frisket film" masks or by converting French air force roundels. A Plasmamodelismo Modelling Supplies sheet offers 12.0 mm and 10.8 mm diameter roundels of the correct shade of medium (not dark!) blue. The code, e.g. B274, should be applied in 9.0 mm high black characters behind the fuselage roundels. Under the wings the codes should be applied in white characters 11.00 mm high at right angles to the fuselage centreline and with the tops of the characters pointing forward on the starboard wing and aft on the port wing. Prewar RAF codes offer the right style of letters and numerals.

Complete the model by attaching the prepainted canopy, e.g. with Clear Fix, and rigging up an aerial with stretched sprue or filament of choice.

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Photos on page 107-108: Detail shots of the Fairey Battle in the RAF Museum at Hendon, North London, UK. (Roger Wallsgrove via Sid Napier)

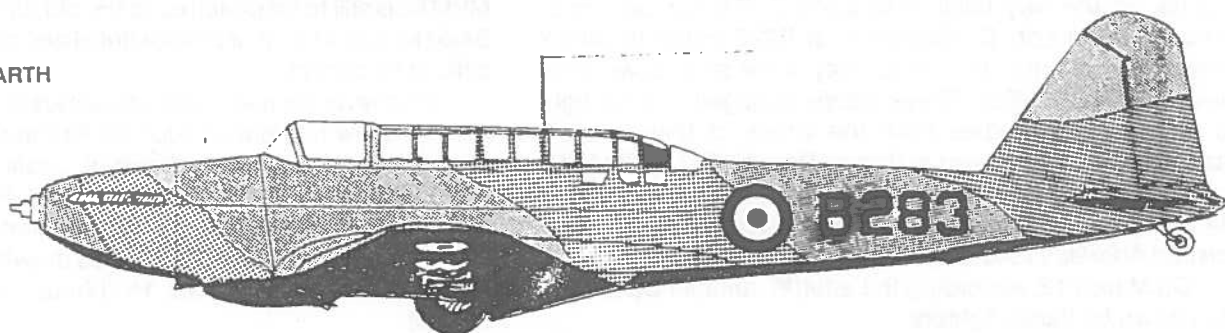
(a) The Battle's fin and rudder were offset to starboard. (b) The gunner's cockpit and 7.7 mm/.303 in. Vickers K. On the Greek Battles there were still three small windows on each side under the gunner's canopy. They were painted over. (c) The landing light, 7.7 mm/.303 in. Browning, bomb and flare bays in the starboard wing. (d) The starboard landing gear. (e) The starboard bomb and flare bays with the fairing (three holes) for the retracted but protruding wheel in the background. (f) The "kidney" exhaust stacks. No spinner was ever fitted.

 DARK GREEN

 DARK EARTH

 BLACK

FAIREY BATTLE



Σχέδια: Η. Κορομπίλης
Drawings by E. Korobilis

STANDARD RAF CAMOUFLAGE PATTERN AND COLORS
ROUNDELS AND WHITE SERIALS ON LOWER SURFACE OF WINGS

Argentine Naval Aviation in Antarctica

Alejandro Milanese

The air component of the Argentine Navy has been involved in antarctic operations for nearly 45 years. This article is a brief summary of the highlights of these operations from their very beginning up to the late seventies. The information comes primarily from *Historia de la Aviacion Naval Argentina* by Rear Admiral Pablo Arguindeguy (DEHN 1980), a real "must" for anyone interested in Latin American aviation.

It is quite important to begin by stating that the first Argentine flight over Argentina's antarctic territories was carried out by a naval aircraft. Between January and March 1942, the transport ship ARA "1st de Mayo" participated in the 4th Antarctic Naval Campaign. Among other equipment, the ship transported a naval aviation Stearman 76D.1, 1-E-41, equipped with a pair of pontoons and some elementary communication equipment. The two-man crew consisted of Teniente de Fragata (Lieutenant) Eduardo Lanusse and Cabo Principal (Petty Officer 1st Class) Erik Blomquist. Upon arrival in the operations theater on 7 February 1942, the first flight of an Argentine aircraft over Argentine antarctic territories was accomplished. This consisted of aerial photography in the Isla Decepcion area. A second flight was carried out by the same aircraft and crew on 8 February over the Melchior area. A third flight occurred on 12 February for photographic purposes over the Estrecho de Gerlache. This Stearman, which belonged to Escuela de Aviacion Naval, flew a total of nearly 30 hours in this campaign. After returning to Buenos Aires aboard the "1st de Mayo", it crashed on takeoff killing both Teniente Lanusse and Cabo Blomquist (10 April 1942).

To place these flights in proper perspective, remember that the first flight over the antarctic was accomplished on 20 December 1928, when the Australian, George H. Wilkens, took off from Isla Decepcion. Almost one year later, on 29 November 1929, Captain Richard Byrd, USN, flew over the South Pole. Other antarctic flights were those of John Rymill (UK), Ruser Larsen (Norway), Alfred von Tischer (Germany), and Lincoln Ellsworth (USA).

This means that before the first Argentine flight, there had been similar operations by other countries. However, it is noteworthy that all previous aircraft had been specially adapted for the hostile environment. In remarkable contrast, the Argentine Stearman was a common trainer biplane, lacking any kind of sophisticated equipment.

Between 1942 and 1951, the only flights carried out in the antarctic by Argentina were by naval aircraft. The following is a chronological summary of Argentine naval aviation operations in the antarctic:

1943-1944: Stearman 1-E-42 piloted by Tte. de Fragata Cristian Belaustegui totaled 20 hours of operations. Support operations were carried out with three Consolidated P2Y-3 from Ushuaia Naval Air Station.

1946-1947: Walrus 2-O-24 operated from ARA "Patagonia", piloted by Tte. de Fragata Oscar Tacchella. Fourteen flights were made for a total of 38 hours.

1947 saw the formation of the Agrupacion de Servicios Antartica (Antarctic Services Group) with Capitan de Corbeta (Commander) Gregorio Lloret as C-in-C. On 13 December, the first direct flight from the American continent to the antarctic was carried out by Douglas DC-4 3-Gt-1. Operating

from Comandante Piedrabuena Naval Air Station, the aircraft took off at 0445 hours with Cap. de Corbeta Mario de Ugarriza at the controls. On board was a very distinguished passenger, Contraalmirante (Rear Admiral) Gregorio A. Portillo, Commander of Naval Aviation. After a 15-hour flight, the aircraft landed safely back at Piedrabuena. The same aircraft flew for well over 30 years on antarctic missions carrying a variety of serials such as CTA-4 and 5-T-40.

1947-1948: Grumman Goose 3-P-25, operating from ARA "Pampa" and piloted by Tte. de Navio (Lieutenant Commander) Osvaldo Guaita, flew a total of 40 hours. This same year, Walruses, M-0-3 and M-0-4, from the cruisers ARA "25 de Mayo" and ARA "Alte. Brown" flew over the Isla Decepcion area.

1950-1951: Walrus 3-P-25, now on board ARA "Buen Suceso" and commanded by Tte. de Fragata Halfdan Hansen, flew a total of 5860 miles over the antarctic.

1951-1952: Two Grumman Gooses were operated by the Grupo Aeronaval Embarcado under the command of Tte. de Fragata Ambrosini. On 7 February 1952, the first flight from the American continent to land in Antarctica was carried out by two Catalinas, 2-P-3 (pilot Tte. de Navio Guillermo Campbell) and 3-P-5 (pilot and Operations Commander, Cap. de Fragata Pedro Iraolagoitia). The latter aircraft was equipped with the first exploration radar carried by an Argentine aircraft. Since this was not only Argentina's, but also the world's first flight from the mainland to the so-called "white continent", an impressive support operation was prepared to operate from Rio Grande Naval Air Station; its aerial component comprising another Catalina, 2-P-6, and one Martin Mariner. In 6 March, Catalinas 2-P-6 and 3-P-5 set another mark, completing, for the first time, a flight between Antarctica and Buenos Aires in one day.

1952-1953: Grumman Gooses 3-P-50 and 3-P-51 operated from the ships ARA "Buen Suceso" and ARA "Bahia Aguirre" under the command of Tte. de Fragata Julio Rodriguez. They flew a total of 15,280 miles conducting photographic and support missions. The first flight of an Argentine naval helicopter in the Antarctica flown by Sikorsky S-55s Hg-1 and Hg-2.

1953-1954: Naval aviation Gooses flew 19,000 miles; S-55s flew 16,500 miles. Goose 3-P-50, piloted by Tte. de Navio Halfdan Hansen carried out a 1000-mile non-stop flight to bring mail and supplies to an Army station.

1954-1955: Grumman Gooses 3-P-50 and 3-P-51 and S-55s 2-Ht-1 and 2-Ht-2 under the command of Cap. de Corbeta Martiniano Leguizamon accomplished a total of 20,000 miles in photographic and support missions operating from the icebreaker ARA "Gral. San Martin". The first death of a naval pilot in Antarctica occurred on 15 January 1955 when Tte. de Navio Juan Camara killed in the crash of his Sikorsky S-55.

1955-1956: Grumman Goose 3-P-51, Catalina 2-P-10, and S-55s 2-Ht-1 and 2-Ht-2 were assigned to the Antarctic Campaign under the command of Cap. de Corbeta J. Martinez Achaval. Some of the pilots were Tte. de Navio Raul Fitte, Tte. de Fragata Barry Hussey, and Tte. de Corbeta Hector Martini. All of these men later became Rear Admirals

and Commanders of Naval Aviation. Contraalmirante Martini is the current C-in-C of Argentine Naval Aviation. A total of nearly 40,000 miles were flown in this campaign.

1956-1957: Catalinas 2-P-7 and 2-P-10 and S-55s 2-Ht-1 and 1-Ht-2 served under the command of Cap. de Corbeta A. Walsh. The Catalinas flew 18,300 miles while the helicopters flew 2,200 miles. During the Winter Campaign, between July and September 1957, helicopters 2-Ht-1 and 2-Ht-2 flew nearly 200 hours from the icebreaker ARA "Gral. San Martin".

1957-1958: This time only S-55s 2-Ht-1 and 2-Ht-2 were assigned to the campaign. A Martin Mariner, 2-P-22, flew liaison missions from the continent under the command of Cap. de Corbeta Martinez Achaval. The officer in charge of the helicopter operations was Cap. de Corbeta Rene Davids. The first loss of a naval helicopter in Antarctica occurred on 26 February 1958, when 2-Ht-1 crashed. Two Catalinas, 2-P-10 and 2-P-5, flew support missions from Ushuaia Naval Air Base under the command of Cap. de Corbeta J. Sgavetti.

1958-1959: This time five aircraft were assigned to the Antarctic Campaign; two Bell 47Ds, two DHC Beavers, and a Beech AT-11, under the command of Cap. de Corbeta Raul Fitte.

1959-1960: Two helicopters and one Beaver served under the command of Tte. de Navio Eduardo Claro. In January 1960, President Dr. Frondizi overflew the national antarctic territories aboard a naval aviation DC-4, CTA-4, piloted by Cap. de Fragata Jose Giliberti.

1960-1961: Two Sikorsky H-19Ds, 2-H-11 and 2-H-14, and two DHC Beavers, 3-G-6 and LAA-101, served under the command of Cap. de Corbeta Sagastume.

1961-1962: The same aircraft used in the previous campaign now served under the command of Cap. de Corbeta Ruben Paccagnini. This was an important campaign, since, for the first time, an Argentine aircraft landed at the South Pole. At 2115 hours on 4 January 1962, two naval DC-3s, CTA-12 and CTA-15, under the command of Cap. de Fragata (later Contraalmirante and C-in-C of naval aviation) Hernes J. Quijada, landed at the South Pole. CTA-12 was piloted by Tte. de Fragata Miguel Grondona and CTA-15 was piloted by Tte. de Navio Jorge Pittaluga. A DC-4, CTA-2, piloted by Cap. de Corbeta Acuna, flew a support mission for the South Pole Gooney Birds.

1962-1963: One Beaver and two H-19s, 2-H-13 and 1-H-14, served under the command of Tte. de Navio Ricardo Meneses. In April 1963, an HU-16 Albatros, 4-BS-2, carried out a rescue mission at Isla Deception.

1963-1964: Two H-19s, 3-H-13 and 2-H-14, and two Beavers, 3-G-6 and IAA-101, were assigned to this antarctic campaign under the command of Tte. de Navio Domingo Negrete. On 9-10 September 1964, the first flight of a naval P2V-5 Neptune over the antarctic territories was successfully carried out. The aircraft, 2-P-107, was piloted by Tte. de Navio Carlos Corti. A similar mission was accomplished by the same aircraft on 6 October.

1964-1965: Two H-19s, 4-H-14 and 4-H-16, and a single Beaver, IAA-101, were under the command of Tte. de Navio Negrete. Three Albatroses, 4-BS-1, 4-BS-2, and 4-BS-3, flew support and rescue missions during this campaign. On 2 August 1965, a DC-4, 5-T-2, piloted by Cap. de Corbeta Ambrossio, flew a glaciological mission over the Isla Deception area.

1965-1966: Two H-19s, 4-H-16 and 4-H015, and two Beavers, 4-G-1 and IAA-101, under the command of Tte. de Fragata Barrios and Tte. de Navio Heguilen, flew a total of 71 hours in this campaign.

1966-1967: Two H-19s, 4-H-13 and 4-H-14, and Beaver 4-G-1 were under the command of Cap. de Corbeta San-guinetti. Total flight time was 90 hours for the helicopters and 50 hours for the Beaver. On 22 February 1967, the first take-off and landing at the new airstrip at Petrel Base was conducted with Beaver 4-G-1 piloted by Tte. de Fragata Figueroa.

1967-1968: Two H-19s, 4-H-12 and 4-H-14, Beaver 4-G-1, and Twin Otter 1-F-1 were under the command of Tte. de Navio Bolognani. Other naval aircraft operating in the zone were DC-4 5-T-3 and Albatroses 4-BS-1 and 4-BS-3. In August 1968, H-19s conducted a rescue mission at the British base, as a result of which Her Majesty's Government decorated the pilots, Cap. de Corbeta Sidoti and Tte. de Navio Perasso.

1968-1969: Two H-19s, 4-H-13 and 4-H-14, were under the command of Tte. de Navio Pechar. Several flights were flown in support of the construction of Base Aerea Vicecomodoro Marambio.

1969-1970: Two Alouettes, 4-H-1 and 4-H-2, and S-55 4-H-13 were commanded by Tte. de Navio Perasso. Total flight time was 56 hours for the Alouettes and 17 for the S-55. For the first time, an Air Force helicopter (a UH-1H) operated between ARA "San Martin" and Base Militar Gral. Belgrano with a total flight time of 161 hours. A naval Neptune, 2-P-101, carried out a glaciological flights over the antarctic territories. The first of these mission was on 8 August 1970; other such missions were flown by 2-P-102.

1970-1971: Two Alouettes, 4-H-1 and 4-H-2, were under the command of Tte. de Navio Robles. Total flight time was 205 hours. In April 1971, a Pilatus Porter 4-G-1, piloted by Tte. Enrico, made the first landing of a wheel-equipped aircraft at Base Almirante Brown. Between August and September 1971, Tte. de Navio Seisdedos carried out several flights to evacuate British personnel from the British Scientific Base at Fossil Bluff.

1971-1972: Two Alouettes, 4-H-1 and 4-H-2, were under the command of Tte. de Navio Imperiale. In January 1972, Tte. de Fragata Raul Rayces became the third man to make a parachute jump over Antarctica. The first jump was made by a USAF Sargent and the second one was an Argentine Army officer, Major Arcondo, who lost his life during one of these jumps.

1972-1973: Two Alouettes, 4-H-2 and 4-H-9, were under the command of Tte. de Navio Imperiale. Total flight time was 78 hours.

1973-1974: One Alouette, 4-H-2, and one H-19, 4-H-13, were under the command of Tte. de Fragata di Stefano. The total flight time was 98 hours.

1974-1975: This campaign was dogged by bad luck. On 11 December 1974, ARA "Bahia Aguirre" began taking on water in a furious storm; pilots Tte. di Stefano and Tte. Espilondo carried out a flight between ARA "Bahia Aguirre" and ARA "San Martin" to get additional pumps. Later, on 5 March 1975, ARA "San Martin" got caught in the ice; after getting out with the help of icebreaker USAN "Glazier", the latter became caught. Two helicopters were assigned to this campaign: 2-H-02 and 4-H-13, under the command of Tte. de Navio Espilondo.

1975-1976: Two Alouettes, 2-H-1 and 2-H-2, were under the command of Tte. de Navio Yacianci. Total flight time was 84 hours. On 15 September 1976, Neptune 2-P-103 crashed while carrying out a glaciological flight. The pilot, Cap. de Corbeta Mutto, and all 11 crew members were killed.

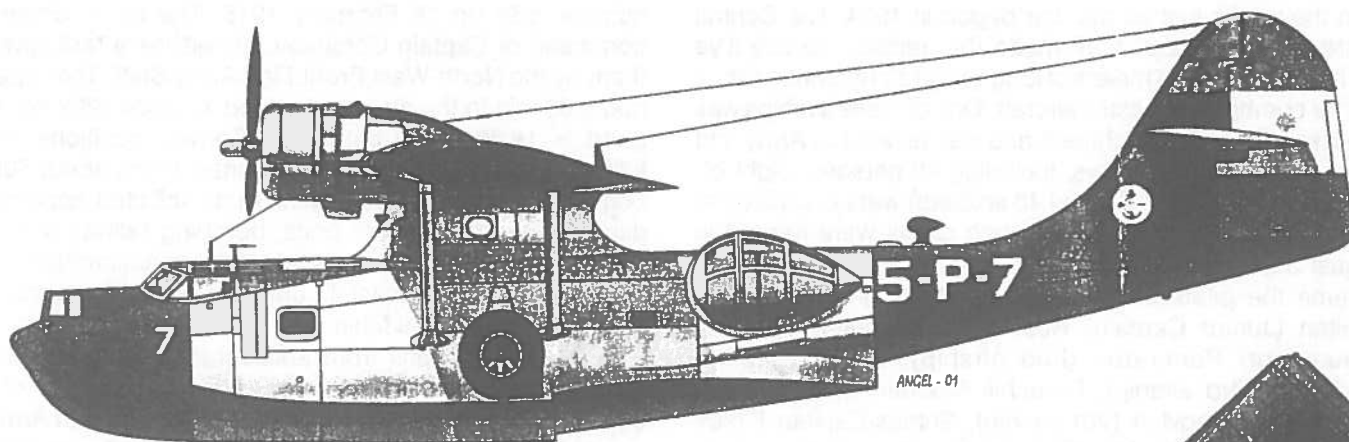
1976-1977: Two Alouettes were under the command of Tte. de Navio Turner.

1977-1978: A total of seven helicopters were assigned to this campaign. Two were naval Alouettes, 2-H-3 and 2-H-11, under the command of Tte. Barrio.

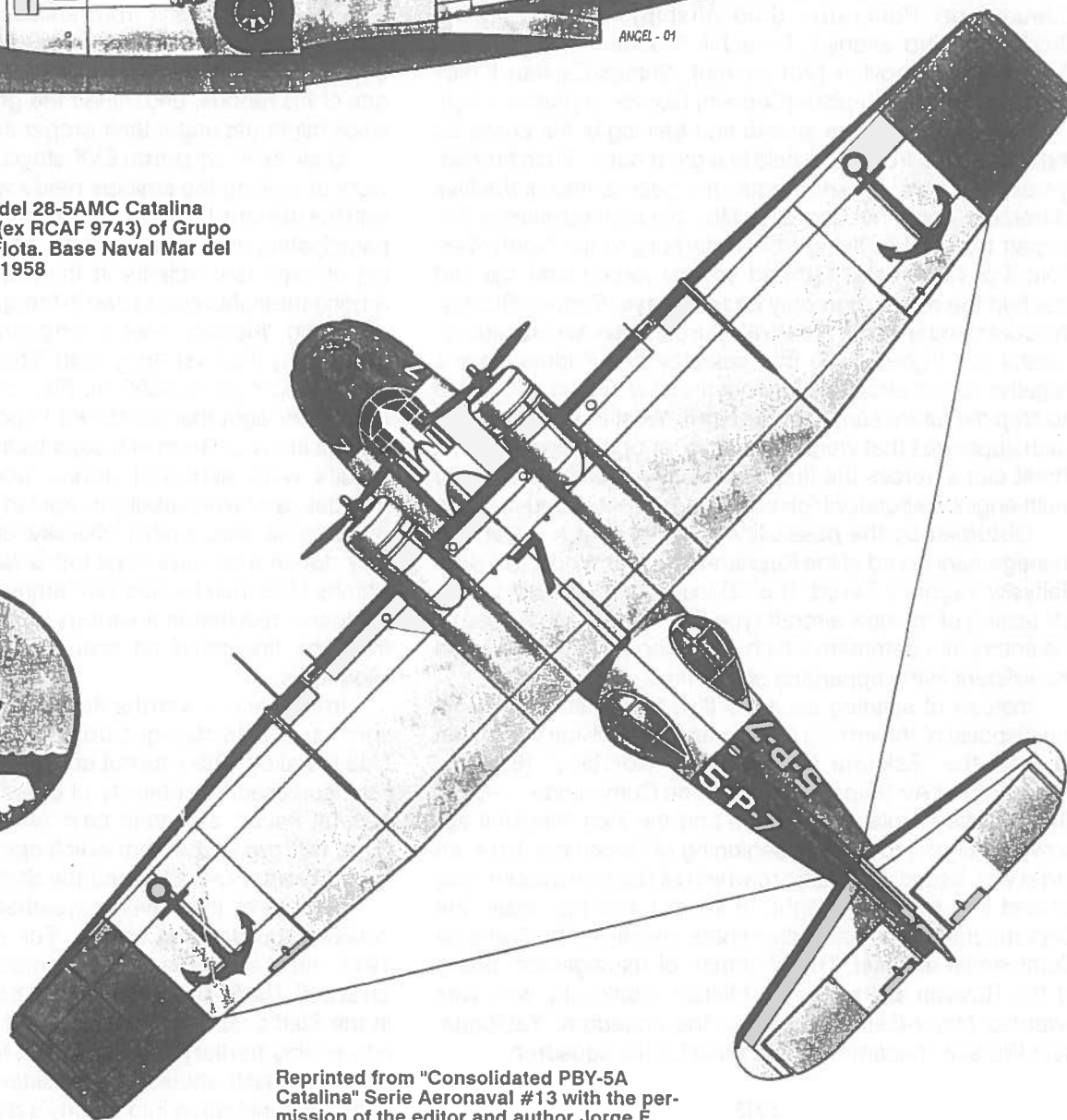
1978-1979: Three naval helicopters were assigned; two Alouettes, 2-H-3 and 2-H-11, and, for the first time, a Sea King, H-32.

In recent years, the helicopters assigned by the naval component to antarctic operations have mainly been Sea Kings deployed aboard the icebreaker ARA "Gral. San Martín".

Alejandro Milanese (SAFCH #607), Ave. Entre Rios 676 - p.13 "B", 1080 Capital Federal. ARGENTINA



Consolidated Model 28-5AMC Catalina
Mk.II 0275/5-P-7 (ex RCAF 9743) of Grupo
Aeronaval de la Flota. Base Naval Mar del
Plata, November 1958



Reprinted from "Consolidated PBY-5A
Catalina" Serie Aeronaval #13 with the per-
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Nunez Padin. Drawing by Angle Bertogna.

Heavy Bombardment Aviation of the Imperial Russian Army

Victor Kulikov

At the beginning of the WWI, Russia was the only country having large four-engined bombers at its disposal. These aircraft, built in the spring of 1914 by the well-known Russian constructor Igor Sikorsky, caught the attention of the Russian military. On 12 May of the same year, a contract was signed between the Russian-Baltic Works and the Military Department for 10 aircraft Il'ya Muromets. First aircraft came out from the works just as the war began in 1914. The Central Board of the General Staff made the decision to use Il'ya Muromets aircraft as means of long-range air reconnaissance and for combat with hostile aircraft. One of these airships was equal to a field air detachment and was allotted to Army and Front Staffs. Special crews, including 49 persons (eight officers, one military official and 40 soldiers) were organized to attend to each aircraft. Seven such crews were formed in August-September of 1914. The best aviators of that time became the pilots of gigantic Sikorsky's aircraft: Shtabs-Capitan (Junior Captain) Rudnev (1st airship), Poruchik (Lieutenant) Pankratov (IInd airship), Shtabs-Capitan Brodovich (IIIrd airship), Poruchik Modrakh (IVth airship), Poruchik Alekhovich (Vth airship), Shtabs-Capitan Firsov (VIth airship), and Kapitan (Captain) Gorshkov (VIIth airship).

Preparations of the aircraft and training of the crews for the flight to the front were held in a great hurry. Such hurriedly-trained crews, not knowing all the peculiarities of the Il'ya Muromets, could not use fully utilize the high qualities of this aircraft type. While flying from Peterburg to the North-West front Il'ya Muromets "1st" had several forced landings and reached the destination only after 23 days. General Ruzsky, the commander of the North-West front, after several unsuccessful trial flights made by Pankratov and Rudnev gave a negative report about the work of the new aircraft and asked "to stop the future supply of the North-West front armies with such apparatus that were of little use for operations". Thus, a threat came across the first-born Russian (and the world's) multi-engined aircraft which could ruin the entire undertaking.

Disturbed by the possibility of losing a large order, the management board of the Russian-Baltic Car Works (Russko-Baltysky Vagonny Zavod: R-BVZ) insisted on thorough practical testing of the new aircraft type that was able to "cause to the enemy the detriment which was impossible to make with the existent flying apparatus of that time".

Instead of sending separate Il'ya Muromets airships at the disposal of the armies and fronts, the decision was made to form the "Eskadra Vozdushnykh Korably" (EVK) or "Squadron of Air Ships". The Supreme Commander-in-Chief Grand Duke Nikolai Nikolaevich and the Tsar Nikolai II approved this project. At the beginning of December 1914, an order was issued according to which all Russian aviation was divided into heavy and light. In accord with this order, the Department of EVK was subordinate directly to the Supreme Commander-in-Chief. The chairman of management board of the Russian Baltic works, Mikhail Shidlovsky who was awarded Major-General, headed the squadron. Yablonna, near Warsaw, became the first base for the squadron.

1915

In December 1914, five Il'ya Muromets airships in a

disassembled state were already at Yablonna with their crew. Under the guidance of the experienced instructors from the works, the airmen mastered the peculiarities of the aircraft and, by February 1915, were able to begin operations. The first operation flights that started from February 12 were made by Il'ya Muromets "Kievsky" crew. The first successful combat flight was made by airship "VIIth Kievsky" N 150 (works number B-9) on 15 February 1915. The crew, under the command of Captain Gorshkov, undertook a task given to them by the North-West Front First Army Staff. They spent 2 hours 39 min in the air and dropped 16 pood (262 kg) (one pood = 16,38 kg) of bombs on German positions. In the following months, Sikorsky's airplanes, lifting about 500 kg bombs and armed with machine guns, inflicted appreciable damage on German rear units, bombing railway junctions and stations, storehouses, and troop concentration. Their appearance was completely unexpected by Germans. The crews of these formidable airships operated, at first, with weak counter actions from anti-aircraft artillery and in the absence of fighter interception. The Commander of the Supreme Commander-in-Chief Staff of the Russian Army, in one of his reports, underlined the great importance that "air ships might get under their proper and right use".

Until 1915, squadron EVK stayed in Yablonna where the work of making the airships ready was going on. In parallel with the training, the most trained crews took part in missions: participating in reconnaissance, photographing and bombing of important objects at the front and in enemy's rear. Among the flights conducted in the spring of 1915 by the crew of airship "Kievsky" was a long-range reconnaissance requested by the First Army Staff. This flight lasted four hours at the height up to 3500 m. Fifty photographs were made during the flight that contained important information about the positions of German troops facing the First Army. Good results were achieved during bombardment of Plotsk, Solodak, and Neidenburg in April in April 1915. On June 14 of the same year, airship "Kievsky" attacked Przhevorsk railway station where five large trains were standing. One of the bombs hit a train loaded with ammunition and the resulting explosion resulted in a serious loss the enemy. The smoke from the fire could be seen from a distance of several kilometers.

In connection with the Russian retreat from Poland in the summer of 1915, the squadron EVK fell back via Belostok and Lida to Pskov. This was not an idea airfield because rain and fog decreased the intensity of operations. Besides the main base at Pskov, a second base at Zegevoid (50 km east to Riga) was organized from which operations were carried out for the North Front Staff and the Staff of the XIIth Army.

In spite of the adverse weather conditions, the crews achieved outstanding results. For example, on 3 October 1915, the crew of the Il'ya Muromets "Kievsky" made a raid on Shavli. The flight continued for 5 hours and as it was written in the Staff's report "the ship penetrated for 110 verst deep into enemy territory, and 170 verst from his own base. This flight to Shavli should be considered outstanding by the depth of penetration into enemy's rear".

In addition to the flights of single ships, the Russian

aviators were the first to use group flight: "...especially notable were the air raids on Tauernkain, Friedrichshof and Mitava, where several ships participated simultaneously".

The attitude towards the airships squadron had sharply changed after its successful activities. The Staff of the Supreme Commander-in-Chief received numerous requests from the fronts and armies requesting that airships be sent to them. But there were not enough airships nor trained crews to fulfil such requests. The Russian-Baltic works was able to produce only 2-3 airships per month, though having the capability of producing up to 10 machines. The main obstacle in the increasing of the Il'ya Muromets output was the absence of good engines. The English "Sunbeam" engines, which powered the majority of airships, were very unreliable and were often responsible for aborting missions. The German "Argus" engines and Russian "RBZ.6" were more reliable, but there were not enough of them to satisfy the demand.

In 1915, a new organization for the flying ships squadrons considerably enlarged the staff of auxiliary units. These now included a training school, meteorological station, workshop, anti-aircraft battery, and garage at the EVK. In addition, three fighting detachments were created from the squadron, each to be operated by a team of 84 persons. The number of such teams was increased to 20.

During the whole of 1915, the pilots from the airships squadron made about 100 operational flights and dropped about 20 tons of bombs.

1916

By April 1916, there were 20 Il'ya Muromets airships in the squadron as well as 24 light airplanes that were used mainly for the training. Operations were carried out by detachments in the South-West Front (the 1st Detachment at Kolodzievka and commanded by A. Pankratjev), North Front (the 2nd Detachment at Zegevoid and commanded by senior Lieutenant G. Lavrov). Some time later the 3rd fighting Detachment was organized at Stan'kovo village to support the troops on the West Front.

To counter the gigantic Sikorsky's airplanes, the German command concentrated anti-aircraft artillery in the area of their activities. In addition, German fighters tried their best to disturb the squadron's operations. On 3 April 1916, seven German airplanes attacked the airfield at Zegevoid. They dropped 28 bombs which damaged four airships.

The 1st Fighting Detachment, under the command of Junior Captain Pankratjev, acting on the South-West Front, conducted intensive reconnaissance and bombing attacks on enemy troops in front of the 7th Army. The army and headquarters repeatedly remarked on the outstanding achievements of the Il'ya Muromets airships. Air reconnaissance was one of the reasons for the successful Brusilovsky break-through on the South-West Front in the summer of 1916. The squadron's 1st Fighting Detachment flew combat tasks both during the preparations for this offensive and during the offensive. Besides reconnaissance and photographing of the enemy positions, the airships carried out bombing on the enemy troop concentrations, communications, and artillery positions. The most successful of these raids were on the Yazlovets and Buchach railway stations in June 1916.

The efficiency of airships raids was profoundly increased

at night although neither the airships nor the home aerodrome were equipped for such flights. The night operations were fully unexpected by the Germans and the bombs were dropped on well illuminated objectives.

As a rule, single fighters avoided attacks on the large and well-armed aircraft. However, in the second half of 1916, the airships began to be attacked by groups of German fighters although the airships were usually able to defend themselves quite adequately. In fact, during the whole war, the Germans managed to bring down only one Il'ya Muromets during the whole war: On 12 September 1916, near Boruny, Il'ya Muromets "N 16" under the command of military pilot Pporuchik (Lieutenant) Dmitry Maksheev was "at the vanguard of an air squadron of two airships and 13 smaller aircraft broke through the enemy's artillery fire and was engaged in a fierce fight with four German airplanes, three of which were forced to drop out of the fight. Having penetrated 12 verts into enemy airspace, the airship perished" (D. Maksheev's from a presentation for an award). The two pilots were killed during the air combat and the ship, out of control and severely damaged, fell into enemy territory.

Russian aviators worked out the tactics of defensive air combat: "threatening manoeuvres", airship coming for assistance, the quick choice of the most advantageous position to beat off the attacks, etc. These were the first steps in developing tactics for bomber defence.

The summer of 1916 was the most intensive period in the work of the EVK: "bombing of railway stations and junctions, storehouses, places of troops and equipment concentrations, artillery positions and other objects, reconnaissance and photographing enemy concentrations, their positions, and their defensive lines, the repulse of the enemy attacks" - these were the main objectives which were successfully fulfilled by Il'ya Muromets airships. One of the most prominent actions of the period was the destruction of a large base for German hydroplanes at Angern Lake near Riga on 23 August. This was accomplished by the 2nd Detachment Squadron consisting of four Il'ya Muromets airships under the command of Senior Lieutenant Lavrov. A total of 73 bombs, with a total weight more than 600 kg, was dropped on hangars and hydroplanes. In August 1916, the greatest number of combat flights in the whole period of the squadron's existence were made - 46 (32 of which were successful). More than four tons of bombs and metal arrows were dropped on the enemy that month.

In October 1916, the main base of the squadron was moved from Pskov to Vinitsa. The squadron's operations the autumn and winter 1916/1917 were almost stopped. The airships were concentrated at the main base, where they underwent repair and re-equipment. The squadron's pilots made 156 operation flights during the whole 1916 (112 of which the combat task was fulfilled) and dropped about 19 tons of bombs.

1917

At the beginning of February Revolution in 1917, the airship squadron had 25 combat and 6 training Il'ya Muromets airships. Only four of these airships were at front - two at the South-West Front (10th detachment, XIIIth and XVth airships) and two at the West Front (3rd detachment, "Kievsky" and XIIth airship). The majority of machines were in

rather shabby condition and could not successfully carry out operational tasks. By 1917, the Il'ya Muromets airship could no longer satisfy the increased requirements of the bomber. The "G" and "E" versions carried a smaller bomber load than the first airplanes and they were useless as bombers. For example, during a 4-hour flight, fuel load alone left no room for bombs, even though the weight of the airship was 7 tons.

At the end of 1916, the 2nd Fighting Detachment of the squadron was transferred from Zegevdol to Vinitsa for re-equipment and repair. The North Front was left without airships. During the spring of the same year, when the Rumanian Front was opened, the 4th Fighting Detachment was formed under the command of Captain Nizhevsky. It was composed of the Vth with Shtabs-Captain Alekhovich, the IXth with Kapitan Nizhevsky, the IVth with Poruchik Shavrov, and the IIIrd with Kapitan Zhigalov. Only three airships managed to arrive at the place of destination by May 1917. Airship IIIrd crashed during landing. The 4th Fighting Detachment was located in the village of Bolgariyka near Bolgrad and serviced the front before the VIth Russian Army. The unit was not distinguished for its activities, because one of the airships was soon put out of action and the other was often in repair. In August, the 4th Fighting Detachment was renamed the 1st. Up to the end of action on the Rumanian Front in September 1917, the detachment under the command of Kapitan Nizhevsky made only 15 combat flights and dropped about 2,5 tons of bombs.

In October 1917, the airship squadron consisted of four Fighting Detachments: The 1st was at the Rumanian Front (Bolgariyka) with two ships (IXth and XVIth); the 2nd at the South-West Front (Strikhovtsy) with four ships (IIIrd, VIIIth, Xth, XIth); the 3rd at the West Front (Stan'kovo) with four ships ("Kievsky", XVth, XIIth, XIIIth); and the 4th at the EVK base in Vinnitsa three ships operational (Ist, IIrd, and IIIrd), four in training (IV, V, VI, XIV, and XVI), and two in reserved that were not assembled. In the summer of 1917 the total number of the airships was 22 machines, but by November 1917 their number had decreased to 18 airships because of the damage sustained in combat and the lack of engines. In the course of 1917, in spite of the increased difficulties, the squadron made about 65 operations and dropped more than 10 tons of bombs.

During the whole German campaign, the 40 airships that took part in combat actions (of the total of 60 airships received) conducted 270 combat flights and dropped about 48 tons of bombs.

At the end of 1917, eight airships in different stage of construction and repair were on the base of the squadron of airships at Vinnitsa and ten airships were left in the Field Forces. On the eve of occupation of Vinnitsa by German troops in February 1918, the crew of the squadron had time to burn some airships. So the Germans got only broken and crashed airships. The destiny of 10 airships with the Field Forces is mostly unknown. Some were seized by Poles and Ukrainians and some were destroyed during the retreat.

1918

During the Civil War (1918-1920), the Red Army formed the Division of Airships (Division Vozdushnykh Korably: DVK) at Petrograd from the airships Il'ya Muromets which were left in the Russian-Baltic factory. The Division of Airships

was a colorless likeness of the former glorious Imperial Squadron of Airships (EVK). It existed for about three years but very seldom took part in the Civil War. In 1918, no combat flight was made; repeated moves to avoid capture by the enemies, constant troubles with the engines and repair of the airships, numerous crashes by poorly-trained pilots hampered operations. The Red Army headquarters did not trust former officers, and experienced pilots such as Bashko, Pankratjev, Alekhovich, and Romanov, who had served in the Division of Airships, were not allowed on flights without the presence of a military commissar on the airships. The chiefs of the workers-peasant Red Air Force were afraid that the former officers would fly over to the enemy.

In the autumn of 1918, three airships were transferred to the South Front, but they could be used on combat missions since there were no maps and no communist pilots. On 30 November, during take-off Il'ya Muromets "First" suffered a breakdown. Only the pilot Alekhovich was killed out of all members of the crew. The second airship stood under snow all of December and did not make any flights. After assembly, the third airship was found to have a defective fuselage and was considered unfit for flight.

1919

At beginning of 1919, the Division of Airships turned out to be inefficient, practically without serviceable airships. From May until December 1919, the Division of Airships received 13 airships Il'ya Muromets of the last series "G", which were completed at the Russian-Baltic plant from airships, building of which were begun before the Bolshevik Revolution. The baptism of fire of the Red Muromets occurred on 8 August on the South Front during the battles against the forces of the General Denikin. On that day, the crew under the command of Nasonov received a task to destroy an armored train. From the airship "The First" bombs were dropped on the armored train near the railway station at Polyanka. However, only two of them hit. During the return flight, the airship made forced landing because of the lack of fuel. The work of the Division of Airships was interrupted by the famous raid by the Don Corps of General Mamontov into the Red rear: The Division had to quickly evacuate their base at Lipetsk and escape to Sarapul. On 22 August, two airships (factory numbers 276 and 275) were transferred to the staff of the Air Group of Special Purpose (Aviagruppa Osobogo Naznacheniya: AON) which was founded for combat with the cavalry of General Mamontov on the South Front. During the whole period of the battle in September 1919, the crews of these airships made only three flights, in which 29 poods of bombs and 1,5 poods of leaflets were dropped. The break-through of the South front by the Voluntary Army of Denikin caused the Division to be evacuated to the rear again.

1920

By spring the spring of 1920, the Division of Airships received three new Il'ya Muromets and two, returned from the South Front, were repaired. In May, the first battle detachment of the Division of the Airships, three airships received an assignment to the West Front in response to a request from the staff of the 16th Army. Red pilots Eryomenko, Tumansky, and Shkudov were appointed the leaders of the airships. The transfer flight to the point of destination took the

whole June; the reasons of such a long period was the poor state of the engines, the bad construction of airships, repeated loss of orienting resulting in forced landings with breakages, and the following repair. At last, on the morning on 9 July, all three airships flew in battle to near the railway road Grodzyanka-Zavishki. The flight was under the control of the Head of the Political Department of the 16th Army, Commissar Pikel. The first airship, piloted by Eryomenko, lost its way and returned to the airfield. The third airship, piloted by Shkudov, lost power and landed in a swamp. Only the airship of Tumansky bombed the town of Bobrujsk. Eleven poods of bombs were dropped on the station. During the Return flight, because of the problems with the petrol system, the airship of Tumansky made a forced landing in a swamp 10 verts from the airfield. (Later it was pulled out, disassembled and taken to the airfield). The same day, Tumansky, took the airship of Eryomenko on a mission to bomb the railway station at Osipovich. During the three-hour flight, 11 poods of bombs and one pood of leaflets were dropped. With these two flights the usage of the airships on the West Front was ended.

At the end of August, two airships (factory numbers 280 and 283) of the 1st Battle Detachment were sent to the disposal of the headquarters of the 13th Army on the South-West Front. The detachment was attached to the staff of the Central Air Group, which conducted operations against the troops of General Wrangel in the North Tavriya (Crimea). From 1 to 18 September 1920, the airships of Tumansky and Shkudov made nine flights, dropping about 108 poods of bombs. 12 poods of metal arrows, and 3 poods of the agitation literature. At the end of September, both airships flew to Kharkov and after two month moved to Koristovka, where the detachment was attached to the headquarters of the Second Mounted Army. On 21 November, the last battle flight of Il'ya Muromets was conducted. It was directed against enemy bands in the vicinity of the villages of Zybkoie, Bogoyavlenskoe, and others.

The last of the Mohicans

In spring 1921, the Soviet Government decided to open the first post-and-passenger air route in Russian with service between Moscow and Kharkov. For its maintenance, 6 airships Il'ya Muromets were transferred from the staff of the Division of Airships. Most of these airships, by that time, were worn out and in need of repair and replacement of engines. Only two airships recently-constructed airships (factory numbers 282 and 285) could be considered serviceable. For this reason, the airships could not fly the distance from Moscow to Kharkov in stage and they made an intermediate stop at Oryol. The crew made 2 or 3 flights a week, transporting mainly state messenger mail and executive passengers. During 43 trips from 1 May to 10 October 1921, sixty passengers and more than 2 tons of mail were transported. At the beginning of 1922 this service was stopped, and airships were disassembled and the Division of Airships disbanded.

The property of Division of Airships was passed to the School for Air Shooting and Bombing ("Strel'bom") at Serpukhov. The airship Il'ya Muromets (the former the fifth postal, factory number is 285) made its last flights here until July 1922, piloted by Boris Kudrin, it suffered a last breakdown. Thus, the history of the famous airships of Igor Sikorsky

finished.

The Armament of the Il'ya Muromets

In the winter of 1913, a "machine-gun landing" was installed on the middle runners of landing gear on airship with factory number 107. The "landing" was situated in front of the fuselage, one meter lower than the nose, and was protected by banisters. On this landing, a 37 mm Hotchkiss gun was attacked. The gunner had to come out from the cockpit during the flight onto the machine-gun landing. However, this bulky structure soon was abolished because of its ineffectiveness, the complicity of loading, the small ammunition capacity, and the low percent of hit.

At the beginning of 1915, on airships of series "B", a machine-gun station was established in the center wing section for defence of the upper hemisphere from attacks by fighters. The defensive consisted of two machine-guns. Member of the crew were armed also with cavalry carbines and "Mauser" pistols. To increase the sphere of fire, brackets with jacks for pintle for "Masden" machine-guns were installed the doors and windows. On some airships of the first series, hatches with jack for pintle of "Maxim" machine-gun "Maxim" were made in the ceiling of fuselage, and on a few airships, for defence from below, a so-called "raven nest" was established at the back. This unit was a "landing" with a length of about two meters and was lowered from the fuselage on ropes. The gunner would lie on the platform and shoot under the tail of the airship and down. A gun position at the rear end of fuselage appeared on the airship of series "G", "D", "E" in 1916. The gunner was sent to the tail only on a sign of danger, since it was dangerous to stay there the rest of the time because of rough air and shock experienced during landing and take-off. The gunner got to the tail by lying down on a little truck and pulling his way along the fuselage. For protection of the gunners from the machine-gun fire of attacking fighters, a special armour from 2 mm tempered steel were made at Putilovsky factory in Petrograd.

Along with a tail installation on the airships of the later series, a machine gun was mounted in the bow from which it was possible to fire at an angle of 25 degrees to the sides and of sixty degrees up and down. On the airships of the last series "E", the number of gun positions reached eight in 1917.

In 1915, a recoilless gun designed by Podpolkovnik (Lieutenant-colonel) Gelvig and Kapitan Oranovsky was installed on one of the Il'ya Muromets. This gun consisted of two barrels for a three-inches field gun, which were connected butt ends for a total length of four meters. One barrel was rifled for a shell while the another was plain for a wad. When fired, the momentum of the shot and wad cancelled, and there was no recoil. The gun was installed on the back spar of the center wing section, and some shots on the ground and two in the air. However, the bulk of this gun made it unsuitable for practical use.

Many problems had to be solved in providing the airships with a bomb load. In 1914, on the airships of series "B", the bombs were hung vertically inside fuselage behind the pilot's seat. The suspension, from special brackets, was from hooks on the tail of the bombs. Between the row of bombs there was a wide space which was occupied by bombs fastened to the floor of fuselage. Later, bombs were suspended horizontally in vertical cupboard-cassettes from which they

could be dropped singularly or in salvos. Dropping of the bombs was done by turning a handle. Small bombs and metal arrows were dropping through an open door or hatch. In 1916 electric bomb release was constructed.

The bomb load of the Il'ya Muromets of series "V" was the largest of all the versions and was 410 kg. Bombs with weight from 4 to 33 kg were placed inside the fuselage, but those with weight from 82 to 410 kg were hung outside. In the autumn of 1915, experiments on dropping practice bombs with weight 25 poods (410 kg) were conducted on an airship of series "V" (factory number is 167) with engines RBZ-6. A bomb with weight of 40 poods (656 kg) was carried, but it was not dropped. Bombs with weight more than 15 poods (246 kg) were seldom used. In combat, bombs with 5 poods (82 kg) were used, but more often the bombs taken on board were 25 pounds (10 kg) and 1 pood (16,38 kg).

It is strange, but on the later airships (of series "G", "D", and "E"), the bomb load was decreased to 150-200 kg. With a total weight of the airship of 7 tons, its value as a bomber during the 4 hours flight was reduced to zero. Attempts by Sikorsky to increase the power of engines caused lead to an increase in fuel consumption with a resulting increase in the weight of airship.

In 1914-1915, the crews of the airships used a simple sighting device designed by Sikorsky which required the angle of sight to be determined by the ranging-shot method which demanded several runs over the target to determine the height, speed, and course of each run. This was possible to do only in the absence of enemy fighters and anti-aircraft artillery. Therefore, it was necessity to work out a method for accurate bombing from any direction and in any condition. This became possible after the appearance of a bomb sight designed by officers of EVK, Ivanov, Naumov, and Zhuravchenko. This new bomb sight allowed bombing even with lateral wind. A great help in bombing was rendered by the creation of special tables by Professor Georgy Botezat, which considered many factors (the direction of the wind, the height of the flight, the weight of bombs and others).

From the beginning, photographs obtained during bombing and reconnaissance were of great importance. On the Il'ya Muromets, the camera was placed in special hatch. The frame in which the camera was installed, was oriented on a fore-and-aft axis so that on series of photographs it was possible to determine the direction of flight of the airship. All operations connected with photographing during the flight, and after, were the duties of an artillery officer. Special importance was attached to the results of bombing. On these photos, registration numbers were added; the first was a series of the photos of the flight and the second was the number of laboratory doing the processing. Each detachment had a aerophotogrammetric department where photos were assembled, deciphered, and the results put on a map. On the photos, was a stripe with two circles showing the time and the altitude when the photo was taken. The airship and date were added after development. For example, the inscription "K 23/3" meant the photos were taken by airship "Kievsky" on 23 March. The report of the pilot was added to reconnais-

sance photos.

In 1917, there was an attempt to use the Il'ya Muromets as a torpedo plane. In spring of that year, the Navy Department planned to create a detachment of Il'ya Muromets armed for torpedo attacks. At the end of July 1917, a torpedo device was installed on one of the airships. However, factory tests were delayed and the delivery of this airship did not take place. The revolution prevented its further realization.

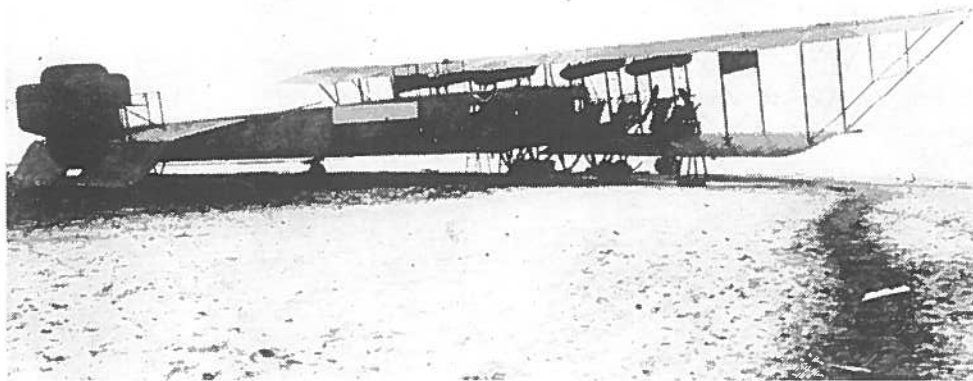
Photo Captions (Page 74, 89-92: All photos via the author)

1. Igor Sikorsky not only flew his four-engine giant, but also trained pilots to fly them.
2. One of the last airships of the "B" series, with "Salmson" engines, before its departure to the front. Corps Airfield, August 1914.
3. "Salmson" engine on the airship of "B" series.
4. Il'ya Muromets at the front, December 1914.
5. Poruchik Gleb Alekhovich near airship N V ("B" series), factory number 143.
6. Vertical aerial photograph of bombing of the railway station at Mlava by airship "Kievsky" on 6 April 1915. In the central of the photograph a bomb dropped from the airship is seen.
7. Airship Ist ("B" series) factory number 135, at Jablonna in January 1915.
8. Airship IIIrd of "V" series (factory number 151) under the command of Poruchik Ozersky. Lublin, summer 1915.
9. Crew of an airship "Kievsky" and staff of the EVK by aircraft. In the center is the commander of the ship, Poruchik Josef Bashko.
10. Airship the "IInd" (factory number 167) with suspended 25 pood (410 kg) practice bomb (dummy with sand). Lida, August 1915.
11. Airfield Jablonna, summer 1915.
12. Il'ya Muromets IM "IInd" of "V" series, 1915.
13. Igor Sikorsky in cockpit of the Il'ya Muromets.
14. Airship the "IInd" of "V" series (factory number 167) was equipped with RBZ.6 engines. Jablonna airfield, autumn 1915.
15. Assembling of just arrived airship "Kievsky" of "V" series (factory number 182) at Koydanovo, July 1916.
16. Before combat flight. From right to left: Alekhovich, ?, Andreev, French correspondent, Nikol'sky, and Nizhevsky.
17. Il'ya Muromets of "G-49" series No 195 with Sunbeam engines. Pskov, May 1916.
- 18,19. Il'ya Muromets of the "D-1" series (factory number 223). Pskov, summer 1916.
20. Wreckages of airship "I-st" of Lieutenant G.I. Lavrov after fall from 3000 m height. All the crew perished. April 29, 1917. Outskirts of the village of Kovalyuvka.
21. A gunner conducts fire from "Madsen" machine gun mounted at the center section of the upper wing.
22. In the cockpit of an Il'ya Muromets of "G-3" series. Lipetsk, 1919.
23. Red Army Il'ya Muromets (IInd trainer), Sarapul, 1920.
24. Il'ya Muromets of the "V" series landing on an airfield at the Airship Division's base. Lipetsk, summer 1919.
25. Crew of 2nd combat ship that belonged to A.K. Tumansky after successful air raid on an enemy airfield near Fedorovka. 9 September 1920, Aleksandrovsk airfield, South-West Front. From the left to the right: Mikhailovsky, Fritsrikov, Kuz'min, Tumansky, and Rodzevich.
26. Forced landing of "Il'ya Muromets" (IInd Trainer) of the Red Army. Sapapul, winter 1919-1920.
27. Tail gunner of Il'ya Muromets (combat ship "fifth", factory number 280) of "G-4" series from the Red Army Fighting Detachment. The gun is a Lewis. West front, August 1920.
28. Red Army Il'ya Muromets at the airfield at Lipezk, 1920.
29. The Air Ships Division (DVK) personnel. Sarapul, September 1919.
30. The 3rd combat ship #283 commanded by F.G. Shkudov. Polish Front, Mogilyov, August 1920.

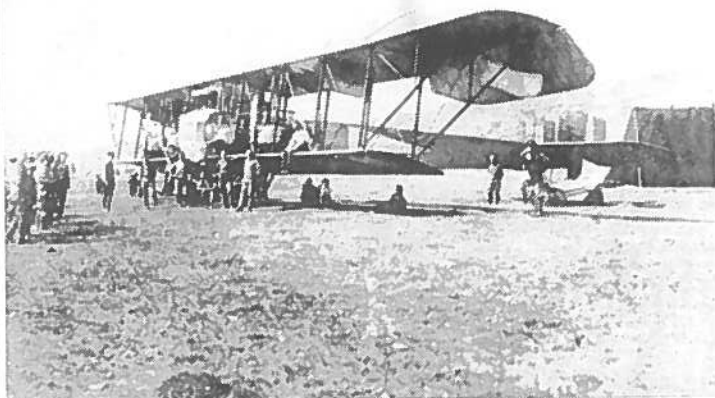
Victor Kulikov, (SAFCH #1573), PO Box 59, 129515 Moscow, Russia.

MOA-4277

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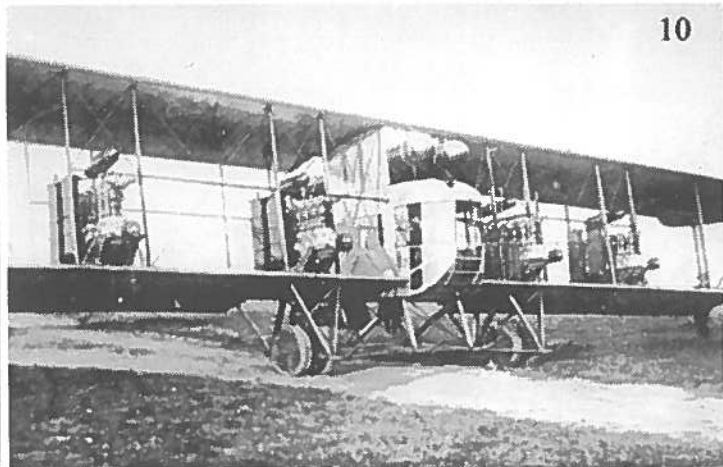
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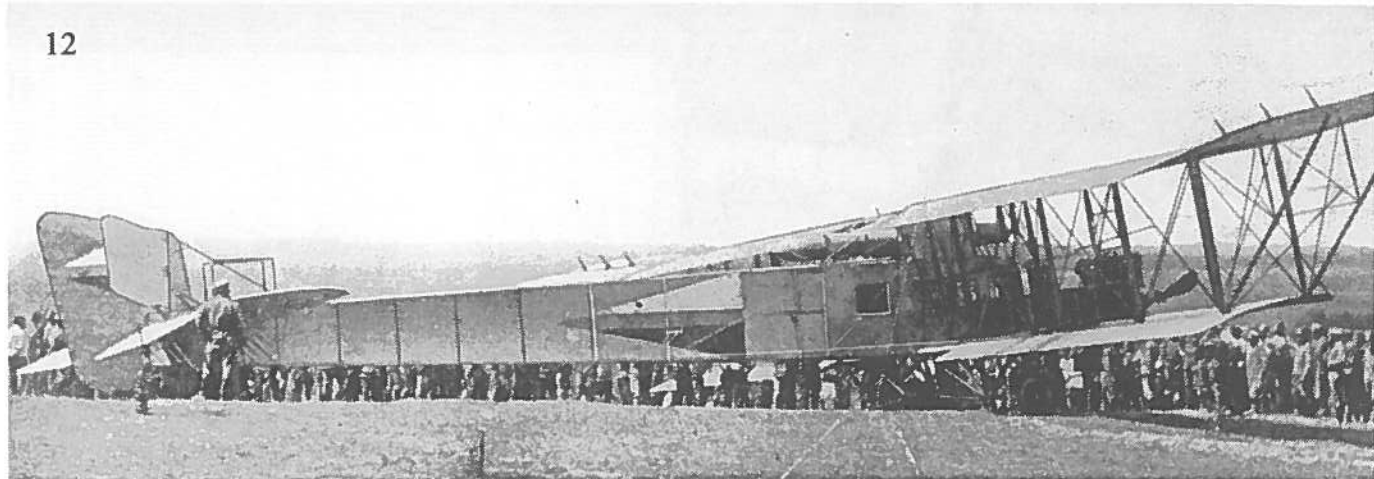
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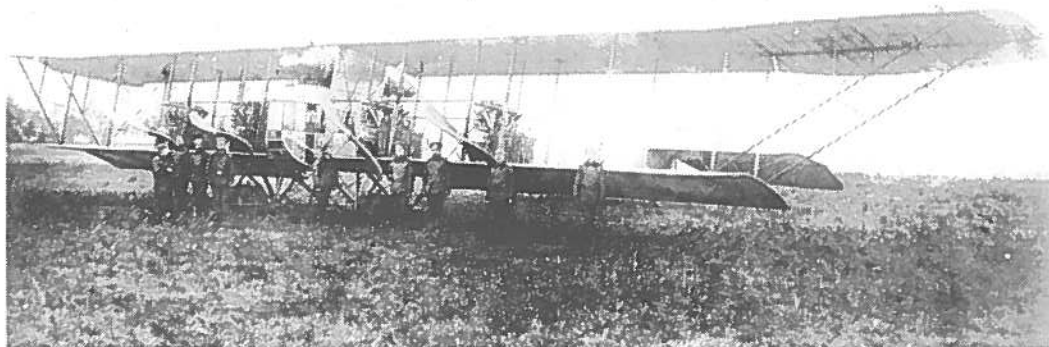
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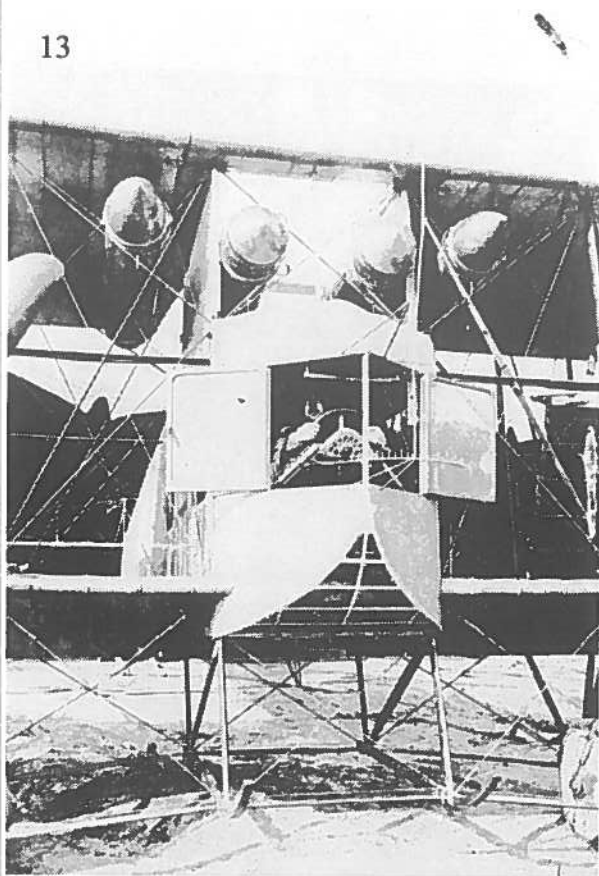
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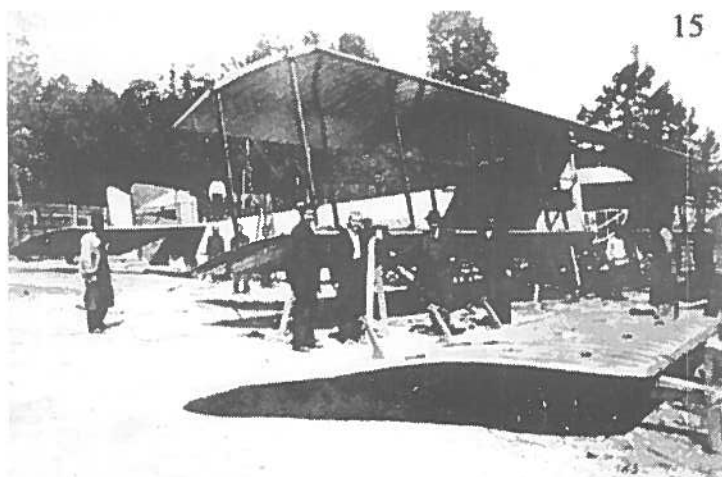
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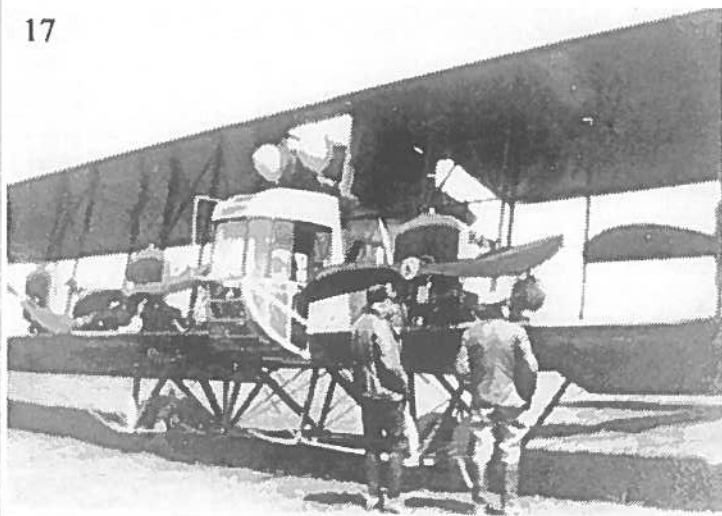
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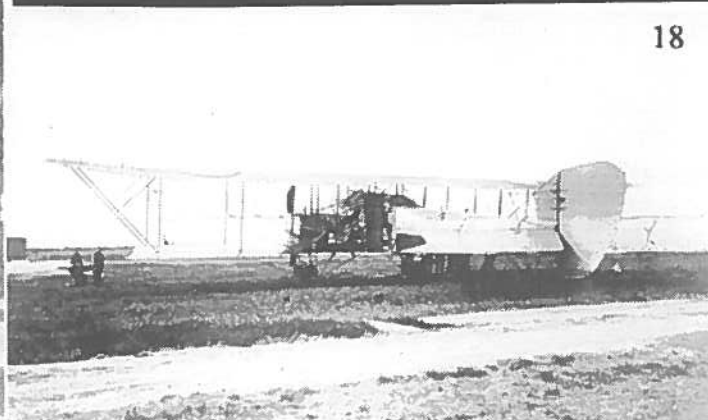
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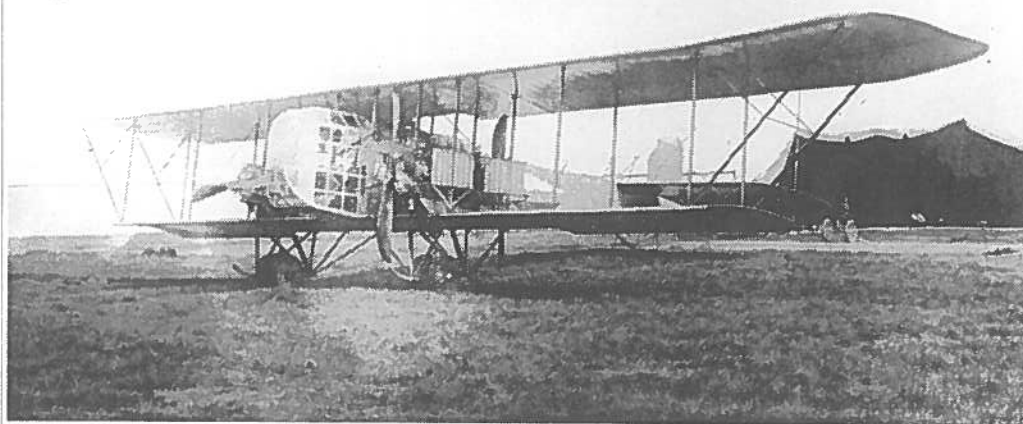
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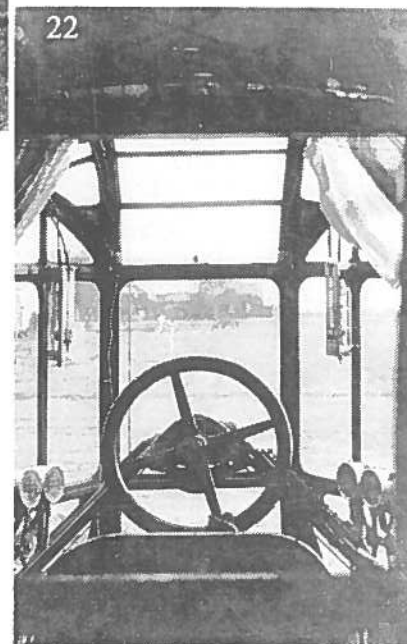
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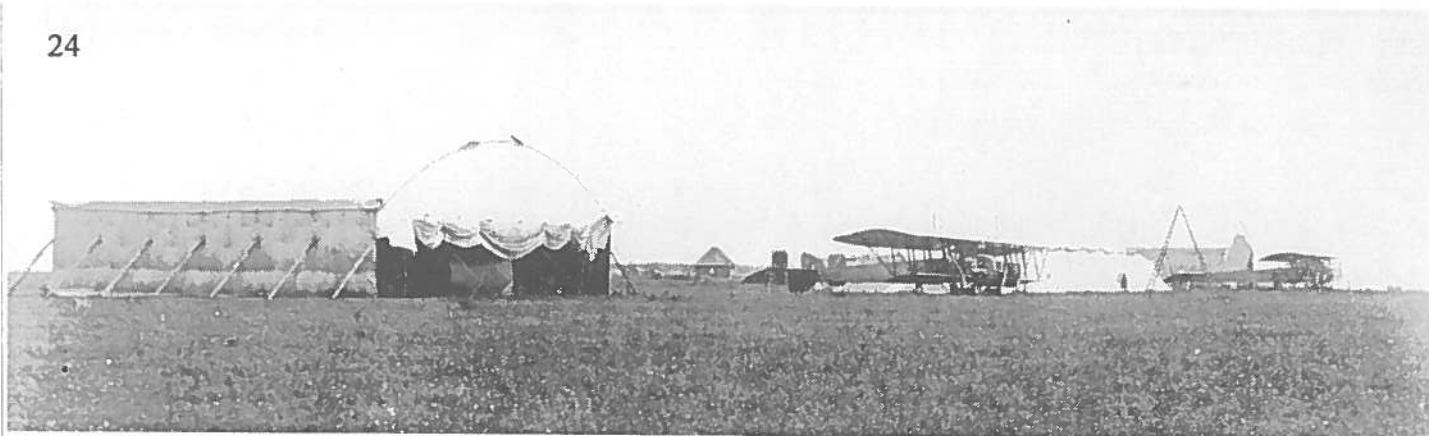
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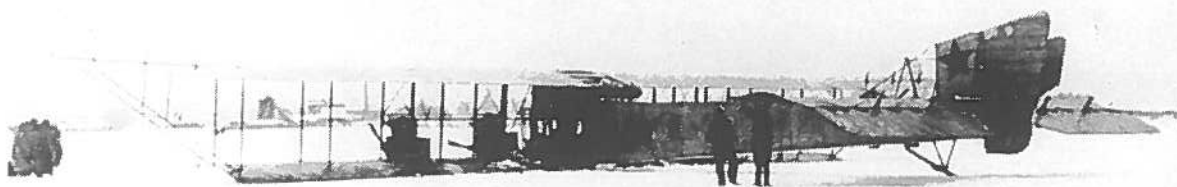
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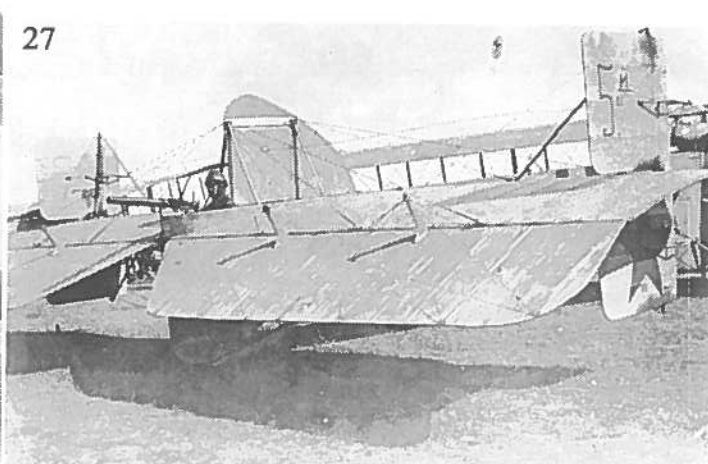
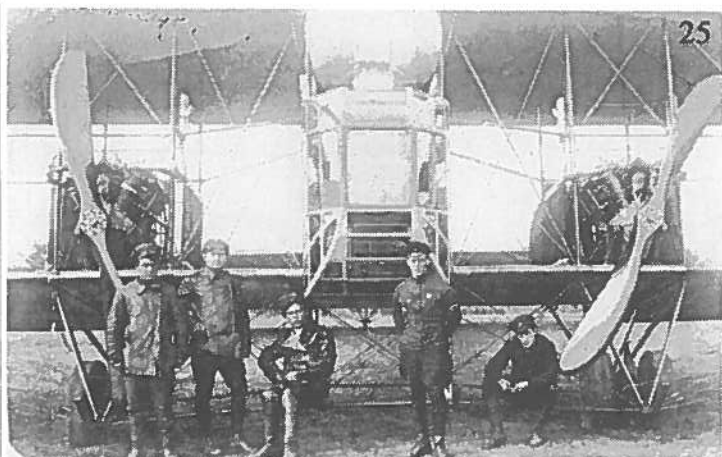


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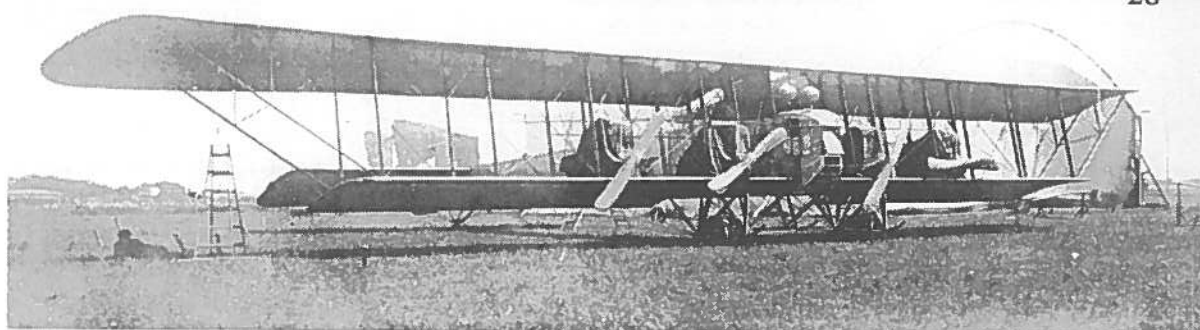


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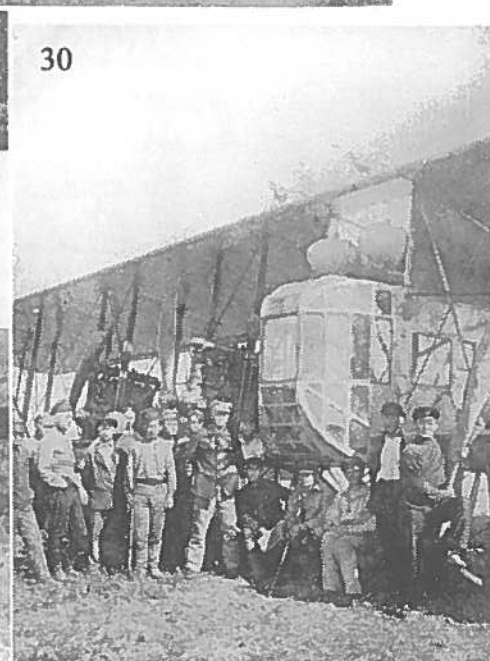


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The Grumman Duck in Latin America

John M. Davis

[Editor's note: This articles appeared on the Web Site of the Latin American Aviation Historical Society (LAAHS) and is reproduced here with the kind permission of their webmaster, Mario Overall, and the author. Their Web Site (www.laahs.com) contains a plethora of excellent articles on Latin American aviation. The following article will give you a good idea of the quality of the information found there. It is a must visit for any enthusiast of the small air forces.]

[Author's note: The following is a brief rundown of what I have in my records concerning Grumman Duck amphibians that were operated in Latin America. Additions, corrections, and other comments - of which I am certain there will be many - will be happily received. One area that I have only considered in passing is that of US military usage of J2Fs in Latin America. Where I have information, I have included it in the country concerned - but it is incomplete as I do not have information on the disposition of most of the aircraft concerned.]

[Editor's Note: The material in parentheses has been added by the authors on the bases of information received in response to the articles original posting.]

Argentina

The Armada Argentina was the second largest user of the Duck, after the United States Navy; and was the only other force to buy new aircraft direct from Grumman. The first eight Duck supplied to Argentina were the Grumman G-20, and were essentially the same as the JF-2 supplied to the USN. They were delivered in February 1937, and were coded M-O-1 to M-O-8. C/nos were 357 to 364. One was written off on 27th May 1938; and the seven others became 0068 to 0074 in the Armada's sequential numbering system.

The next group of Ducks were four Grumman G-15. (Stockily speaking the G-20 and G-15 were not Ducks; but I felt that their inclusion was essential.) These were the same as the USN J2F-4, but without a tailhook. Delivered in November 1939 as 0090 to 0093, and coded 3-O-5 to 3-O-8. C/nos were 612 to 615.

Historia de la Aviación Naval Argentina states that fifteen G-15 and G-20 were delivered, and were coded M-O-1 to M-O-15; but I have not traced the three extra aircraft.

The surviving G-15 and G-20 were replaced between 1946 and 1948 by 22 J2F-5 and 9 J2F-6 bought surplus by the Argentine Purchasing Commission. Historia gives the codes as "2-O-1 to 2-G-30" - but I have no other information as to the actual coding. (These serials are accurate, but the consensus is that '2-G-30' should be '2-O-30'.) The serials for these are 0148 and 0149, 0173 to 0183, 0235 to 0237, and 0244 to 0258. The last Duck was withdrawn from Armada Argentina service in 1960 - and with it the end of the Duck in military use anywhere in the world.

Despite the forty-three (or forty-six) Duck in service in Argentina, there is no record of a civil Duck on the LV??? register.

(An article on the Argentine Ducks appeared in SAFO #23.)

Brazil

The following J2F-6 were stricken by the USN at Manaus on 31st December 1945: BuA 32653; BuA 36945; BuA 36947; BuA 36968; BuA 36998; BuA 36999; and BuA 37011. Presumably all had been used in conjunction with the activities of the Rubber Development Corporation. (None of the USN Ducks had anything to do with Rubber Development, but were part of a large US force spread throughout the area.)

Colombia

It is often reported, even by the USAF, that OA-12 48-563 to 48-567, and A-12A 48-1373 to 48-1375, were delivered to the Colombian Government. The OA-12 seem to have been converted for operations in Alaska; whilst the A-12A were converted and crated at Robbins Air Force Base, Georgia. However, if they were destined for Colombia they were not delivered, and sat in their crates in Georgia until sold in the US in 1949.

No record exists of any civil Duck registered in Colombia. However, N55S, J2F-6 BuA 33614, was at Leticia from approximately 1965 to 1982. It did not fly at all during this time, and was pretty well derelict when returned to the US. During the time the registered owners were Tres Americae Enterprises Inc., Zephyrhills, FL, until 19th August 1970; then Lake Wales Air Services Inc., Lake Wales, FL - for the rest of its stay.

Cuba

CU-P-154 was a Duck registered last quarter of 1947 to Reinaldo Ramirez Rosell. A year later Sr Ramirez was said to be under arrest by the Cuban Army. The Duck was cancelled off the Cuban register between 1st December 1950 and 28th February 1951. One would presume that this aircraft was a US civil example; and also was the J2F-6 Dan Hagedorn noted was "detained in Miami" on its way to Cayo Confites.

J2F-6 BuA 33542 was stricken by the USN at Guantanamo Bay on 30th April 1949.

Ecuador

There were three Duck in Ecuador, all operated by Aerovías Nacionales del Ecuador SA (ANDESA), of Quito. The principal source of ANDESA's income was a freight hauling contract they had with the Shell Company of Ecuador. This commenced in October 1946, but was abruptly cancelled on 24th April 1947. Whether the Duck were used on the Shell contract, or on ANDESA's other work, is not known.

HC-SCD, J2F-6 37025 Latin American Airways Inc. Delivered to ANDESA 26th April 1946. Seized October 1947 by Ecuadorian Government for non-payment of taxes. Sold to Peru, August 1948. To OB-LAR-236.

HC-SCE, J2F-6 36960 Latin American Airways Inc. Delivered to ANDESA 26th April 1946. Reported on insurance as written off prior to 3rd October 1949. Thus the accident must have happened prior to ANDESA's demise on 17th October 1947.

HC-SCF, J2F-6 32683 Latin American Airways Inc. Delivered to ANDESA 26th April 1946. Reported on insurance as written off prior to 3rd October 1949. Thus the accident

must have happened prior to ANDESA's demise on 17th October 1947.

Mexico

XB-SUS, J2F-6 BuA 36964. N67647 was sold to Marcelo Gaume, La Paz, BC., on 29th April 1949. As XB-SUS dates from January 1953, it probably initially flew with an XA-xxx registration. XA-HUQ is the only registration for which I have no identification, but I have no proof that it is the Duck.

The Armada de Mexico operated two, or possibly three, Duck for a short time. They were bought from Coastal International Corp, Alexandria, VA, in 1947; although some reports give the date as September 1950. No US Navy serials are available to identify the aircraft:

MV-07 withdrawn from use in 1951 or 1952

MV-08 withdrawn from use in 1951, and sold to USA

MV-0? no information. Is this the aircraft on display at Vera Cruz in the early 1970's?

(The third Duck was damaged at Ensenada on delivery, and was abandoned. The two remaining aircraft were

based at Veracruz. MV-07 was lost in an accident and, if one aircraft was really returned to the USA, it must have been MV-06.)

Peru

As with Ecuador, there were three civil Ducks that operated in Peru; all were used by the Instituto Lingüístico de Verano (ILV). This was a branch of Wycliffe Bible Translators, and were operated in conjunction with Ministerio de Educacion.

OB-KAA-164, J2F-5? "80280." bought jointly by ILV, Ministerio de Educacion, and the Ministerio de Salud 12th July 1946, from the US Air Mission in Lima, for \$3,500. Named Amauta, 20th July 1946. Regd 5th December 1946; until ILV's move to Yarinacocha in 1947. Cx after 1950. Exhibited at the Parque de las Leyendas, Lima, in Peruvian Air Force markings as '164.' Broken up early 1980s. The real identity of this aircraft is not yet established. The Peruvian records give it as ex-USAAF. One source gives it as an ex-US Marine J2F-2. (By the process of elimination, OB-KAA-164 is 99% certain to be a J2F-5 ex-BuA 00765 which was assigned to the US Navy Mission to

Peru on March 1945 and SOC Lima 30 September 1946.)

OB-LAR-236, J2F-6 37025. HC-SCD of the defunct ANDESA, bought from Ecuadorian government for \$800. Flown to Peru 1st October 1948. Named Amauta II. Regd 18th October 1948. W/o 1st May 1949, Puerto Inca, Rio Pachitea. Cx 1st February 1950.

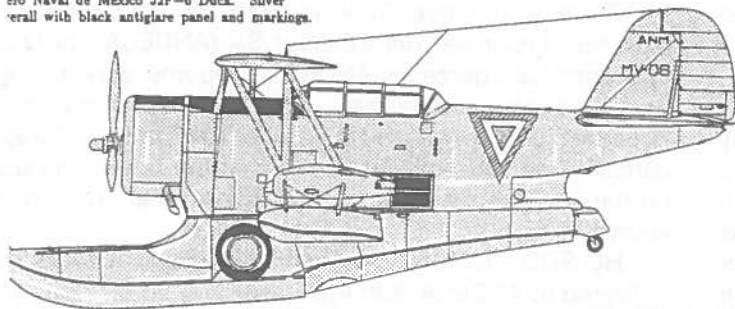
OB-LAT-239, J2F-5 0763 (In all probability BuA 00763 c/n 2439). Bought in USA, 21st December 1948. Delivered to Peru June 1949. Named Amauta III. Regd 11th August 1949. Crashed Rio Urubamba (unknown date). Cx 20th April 1951.

Venezuela

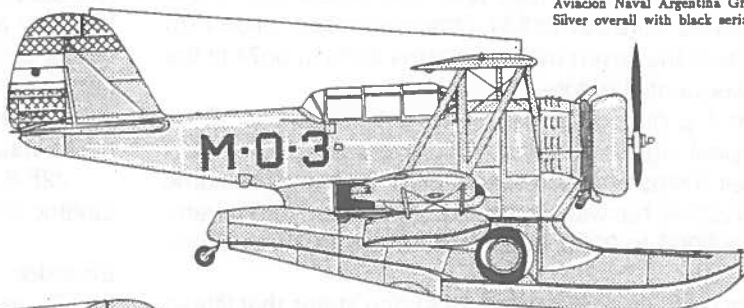
On 6th July 1952 N1939M, J2F-6 BuA 33602, was sold to Dr Roberto Baptista, at Maiquetia, La Guaira. His mailing address was c/o TACA de Venezuela, which by this date was a subsidiary of Linea Aeropostal Venezolana. No registration known.

Acknowledgements: Many thanks to the assistance of Santiago Flores, Dan Hagedorn, Gary Kuhn, and Harold G. Martin.

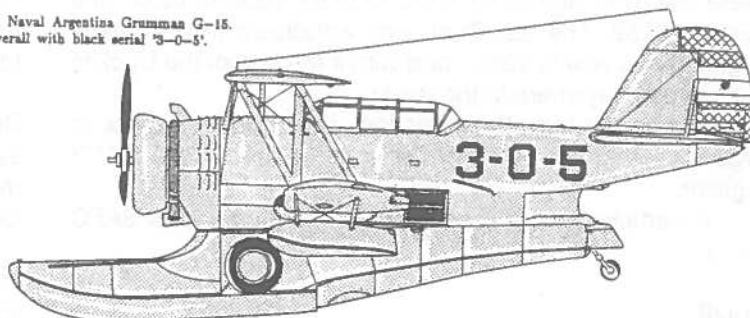
Aviacion Naval de Mexico J2F-6 Duck. Silver overall with black anti-glare panel and markings.



Aviacion Naval Argentina Grumman JF-2. Silver overall with black serial 'M-0-3'.



Aviacion Naval Argentina Grumman G-15. Silver overall with black serial '3-0-5'.



These drawing, by Colin Owers, first appeared in the Small Air Forces Observer #47, July 1988.

T-34 in Uruguayan Air Force Service

Roland Grasso A.

In the midseventies, the FAU began negotiations for the acquisition of a trainer to replace the T-41 as the primary trainer for the EMA (Escuela Militar de Aeronáutica) and as the basic trainer for the newlygraduated officers as a preliminary step before flying T-6s.

At this time, Uruguay was passing through an turbulent political situation with the Government in the hands of the Military Forces and political activities forbidden. Because of this, the usual channels for obtaining supplies from US military sources were practically closed; the US State Department was reluctant to deliver flying material with offensive potential. For this reason, the FAU tried to satisfy its requirements through surplus dealers. Several negotiations were made without success until 1977, when Mr. Paul Pribble sold a single T-34A to the FAU. This aircraft was serialled 650. But one aircraft was not the solution to the FAU problem. The search was reinstated a few months later and the effort were fruitful this time. In the Spring (Southern hemisphere) of 1977, 25 ex-US Navy T-34B were acquired and delivered disassembled to Uruguay in three flights of an Aero Uruguay Canadair CL-44. These aircraft were assembled and flighttested by the BMA (Brigada de Mantenimiento y Abastecimiento - Maintenance and Supplies Brigade) of the FAU based at Carrasco. The planes were progressively taken on charge beginning in November 1977 and throughout 1978. These aircraft were serialled from 660 to 684.

In 1980, the Chilean Navy offered as a gift four surplus Mentors: one T-34A and three T-34B. These aircraft, flown to our country by Uruguayan crews, were received on July 14. They were taken on charge on July 17 and assigned to the Grupo de Aviación No 1 (Instrucción y Entrenamiento) based at Durazno, with the serial numbers 651 (T-34A) and 685687 (T-34B).

In 1991, conversations with the Spanish Ejército del Aire reached an agreement to transfer to the FAU 17 T-34As which had been stricken off charge in 1987-88 and most of which were stored at Maestranza de Albacete. These aircraft arrived to Uruguay disassembled and packed in wooden boxes. They were received by the FAU on April 24, 1991, according to Orden del Comando Gral. De la Fuerza Aérea No 3196 (Air Force General Command Order). Again, the BMA was responsible for assembling and test flying the Mentors. The serial numbers assigned were 630-646. While unpacking the boxes received, the BMA people were surprised by the existence of an 18th T-34 body; the Spanish apparently included this aircraft, that had been written off because of an accident in which it was damaged beyond repair, as a source of spare parts. This plane does not appear in any official list neither of

delivery from the Ejército del Aire, nor of acceptance by the FAU. It was a T-34A ex-USAF 527652, identified by the EDA as E17-2; its fuselage number was 791-02.

Not all 17 officiallyreceived aircraft actually entered service; on 23 March, 1992, two of them (those that would have been FAU 630 and 639) were transferred, still in their crates, to Uruguayan Naval Aviation, which assigned serial numbers 262 and 263 to them, although they were never assembled. Several FAU aircraft also remained unassembled (s/n 631, 637, 640, 641 and 642); some of them because their engines were time expired and others being cannibalized to provide spare parts to those in service.

Finally, another aircraft, s/n 638, enjoyed a very short life in the FAU, beginning to fly in January/92 only to be written off in an accident in March/92, before completing 40 flight hours in Uruguayan service.

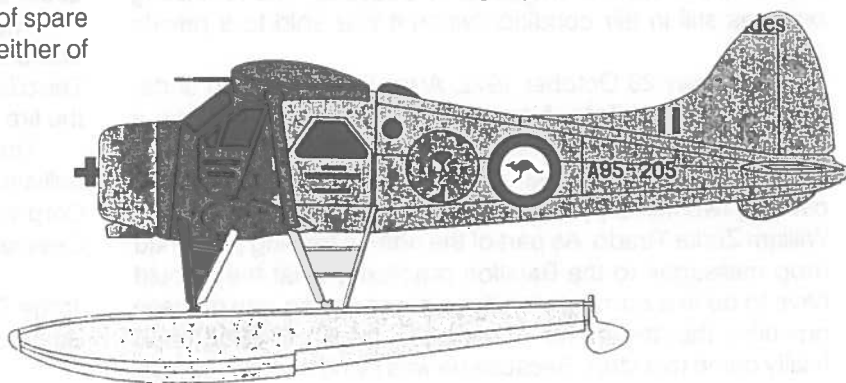
After almost a quarter of a century serving under Artigas flag, the Mentor career in the FAU was approaching its end. The FAU called for bids to provide an instruction and training aircraft as a replacement for the tired Mentors and T-41s. In 1998, an order for 13 Aermacchi SF 260 EU was placed. These aircraft, s/n 610 to 622, were assigned to the EMA. The still extant T34s were offered to Argentina and Bolivia and, after some negotiations, it was decided to transfer 11 T-34s (FAB-901 to FAB-911) to the Bolivian Air Force (FAB) and two to the Argentine Air Force. The FAB received the first 4 T-34s on July 14, 2000, which were flown away on the next day by Bolivian crews. The same occurred with the 2nd and 3rd groups (3 aircraft each) which left Carrasco on 5 August 2000 and 10 October 2000. The last Mentor to go to Bolivia, which, incidentally was the eldest FAU T-34, s/n 650, was disassembled, packed and carried to Santa Cruz in a FAU C-130B s/n 591, on 13 November 2000, where it was reassembled by FAU technicians.

On 23 April 2001, an Argentine Air Force IA 50 G II arrived Carrasco with technicians and crews for the reception and transportation of the two Mentors ceded to the FAA. Those planes, FAU 635 and 646, took off to Córdoba on 2 May with Uruguayan and Argentine crews, with the IA 50 G II as a support plane. In spite of being involved in several accidents during its FAU service, the Mentor never took a life. Regretfully, shortly upon arrival to Santa Cruz de la Sierra FAB-903 (ex-FAU 677) crashed with the lost of both crew members.

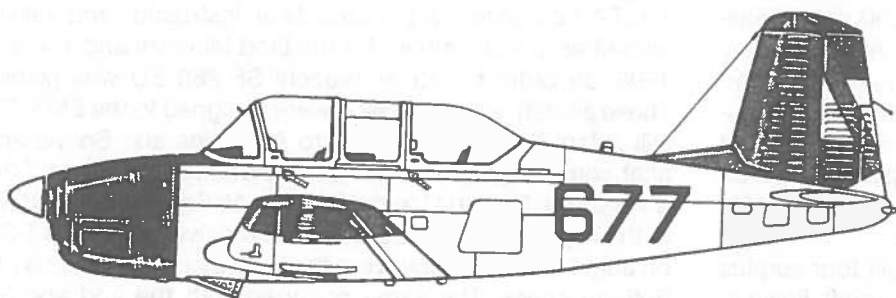
Roland Grasso A. (SAFCH #384), J. Herrera y Obes, ap. 1404, 11100 Montevideo, Uruguay.

Max Decals
Antarctic Aviation Series

RAAF Beaver A95-205 Australian National
Antarctic Research Expedition 1962.



FAU s/n	FAU c/n	USAF USN	Previous Identity	Date TOC	To						
650	G.133	53-3372	Chile Navy 202	7/30/1977	FAB-911	681	BG-142	140808	1/19/1978	FAB-907	
651	G.138	53-3377		7/17/1980	Urug Navy 261	682	BG-124	140790	1/19/1978		
660	BG-88	140754		11/19/1977		683	BG-90	140756	11/19/1977		
661	BG-95	140761		11/19/1977		684	BG-140	140806	1/19/1978		
662	BG-84	140750		12/23/1977		685	BG-289	140955	7/17/1980		
663	BG-212	140878		12/23/1977		686	BG-139	140805	7/17/1980		
664	BG-66	140732		1/19/1978		687	BG-163	140829	7/17/1980		
665	BG-166	140832		1/19/1978		630	G.21	52-7640	4/24/1991	Urug Navy 262	
666	BG-18	140684		1/19/1978		631	G.35	52-7654	4/24/1991		
667	BG-181	140847		1/19/1978		632	G.36	52-7655	4/24/1991	FAB-905	
668	BG-38	140704		12/23/1977		633	G.42	52-7661	4/24/1991	FAB-908	
669	BG-224	140890		4/14/1978		634	G.46	52-7665	4/24/1991	FAB-909	
670	BG-94	140760		11/19/1977		635	G.47	52-7666	4/24/1991	FA Argentina	
671	BG-103	140769		11/19/1977		636	G.52	52-7671	4/24/1991	FAB-901	
672	BG-44	140710		12/23/1977	FAB-910	637	G.56	52-7675	4/24/1991		
673	BG-48	140714		12/23/1977		638	G.61	52-7680	4/24/1991		
674	BG-69	140735		12/23/1977		639	G.66	52-7685	4/24/1991	Urug Navy 263	
675	BG-222	140888		12/23/1977		640	G.81	53-3320	4/24/1991		
676	BG-223	140889		12/23/1977		641	G.107	53-3346	4/24/1991		
677	BG-324	144017		11/9/1978	FAB-903	642	G.111	53-3350	4/24/1991		
678	BG-28	140694		1/19/1978	FAB-904	643	G.732	55-175	4/24/1991	FAB-906	
679	BG-149	140815		1/19/1978		644	X-101		4/24/1991		
680	BG-83	140749		1/19/1978		645	X-102	53-4128	4/24/1991	FAB-902	
						646	X-103		4/24/1991	FA Argentina	



Beechcraft T-34B Mentor FAU-677. Finish is white with orange FS22190 trim. Serials, lettering and anti-glare panel are black.

Reprinted from Scale Aircraft Modelling, October 1994. Drawing by Mike Keep.

Piper PA-18 Ecuadoran Army Service

Jorge Delgado P.

Since the PA-18 had its genesis in the Piper J-3, the airplane was easy and fun to fly and was used in many applications including aerial mapping, crop dusting, glider towing, and flight training. The armed forces of several countries have used it both for training and as a utility airplane. The best example of this is the Israeli Air Force who still uses it as a primary trainer at their air academy. The Ecuadoran Army chose the PA-18 because its low maintenance costs made it an ideal trainer for their cadet pilots. The Army purchased three Piper PA-18 for their flying school. Two of these were written off in training accidents, one at the city of Guayaquil and the other at Quevedo. The remaining one was still in fair condition when it was sold to a private owner.

On Friday 20 October 1972, Army PA-18 #18250 under the command of Tnte. Manuel Cortez Landazuri was on a training flight to the facilities of the Batallon del Suburbio. Although the back seat was designed for one person, he was carrying two military policemen, Mario Vivanco Guerrero and William Zurita Tirado. As part of the normal training pilots had drop messages to the Batallon practicing what they would have to do in a combat situation. It was during one of these practices that the motor of the plane began to cough and finally come to a stop. Because he was flying at only 500 feet,

the pilot opted to make an emergency landing on a street that ended in a large open space. However, because of the extra weight in the back seat, the plane could not make it safely into such a closed space. The landing gear caught on some telephone lines and the plane landed nose first into the mud. It ended up in a vertical position with the motor in the cockpit.

People who witnessed the accident ran to help the crew who were momentarily stunned by the impact. The fuel tanks were broken in the crash and gasoline was leaking into the cockpit. In their effort to extract the crew, they shook the wings causing the gasoline to fall onto the red-hot cylinders of the engine catching fire almost immediately.

The occupants of the back seat suffered burns, fractures, and bruises, but they were pulled out of the wreckage alive. The pilot, whose legs were trapped by the engine, died before the fire could be put out.

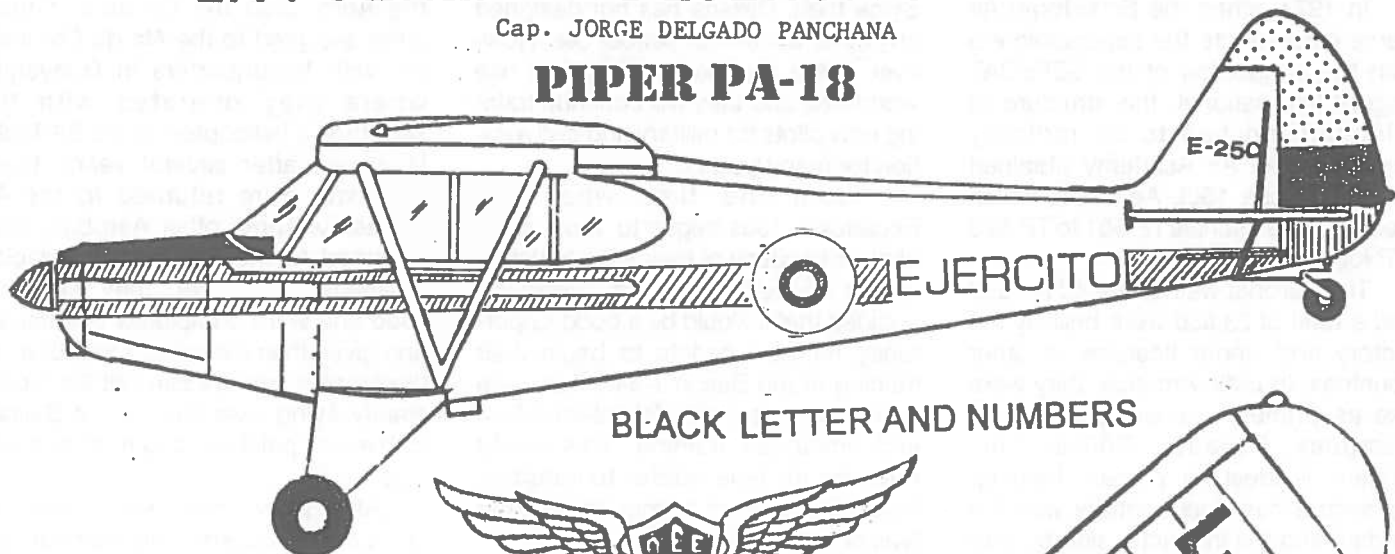
The crash of #18250 marked the end of the short but brilliant career of the PA-18 with the Ecuadoran Army Flying Corp who then procured new equipment in the form of the Cessna 172, 206, and T-41 Mescalero that still serve today.

Jorge Delgado P. (SAFCH #862), PO Box 2207 - URDESA, Guayquil, Ecuador.

"LA FUERZA DEL EJERCITO EN EL AIRE"

Cap. JORGE DELGADO PANCHANA

PIPER PA-18



BLACK LETTER AND NUMBERS



FLAT BLACK



YELLOW



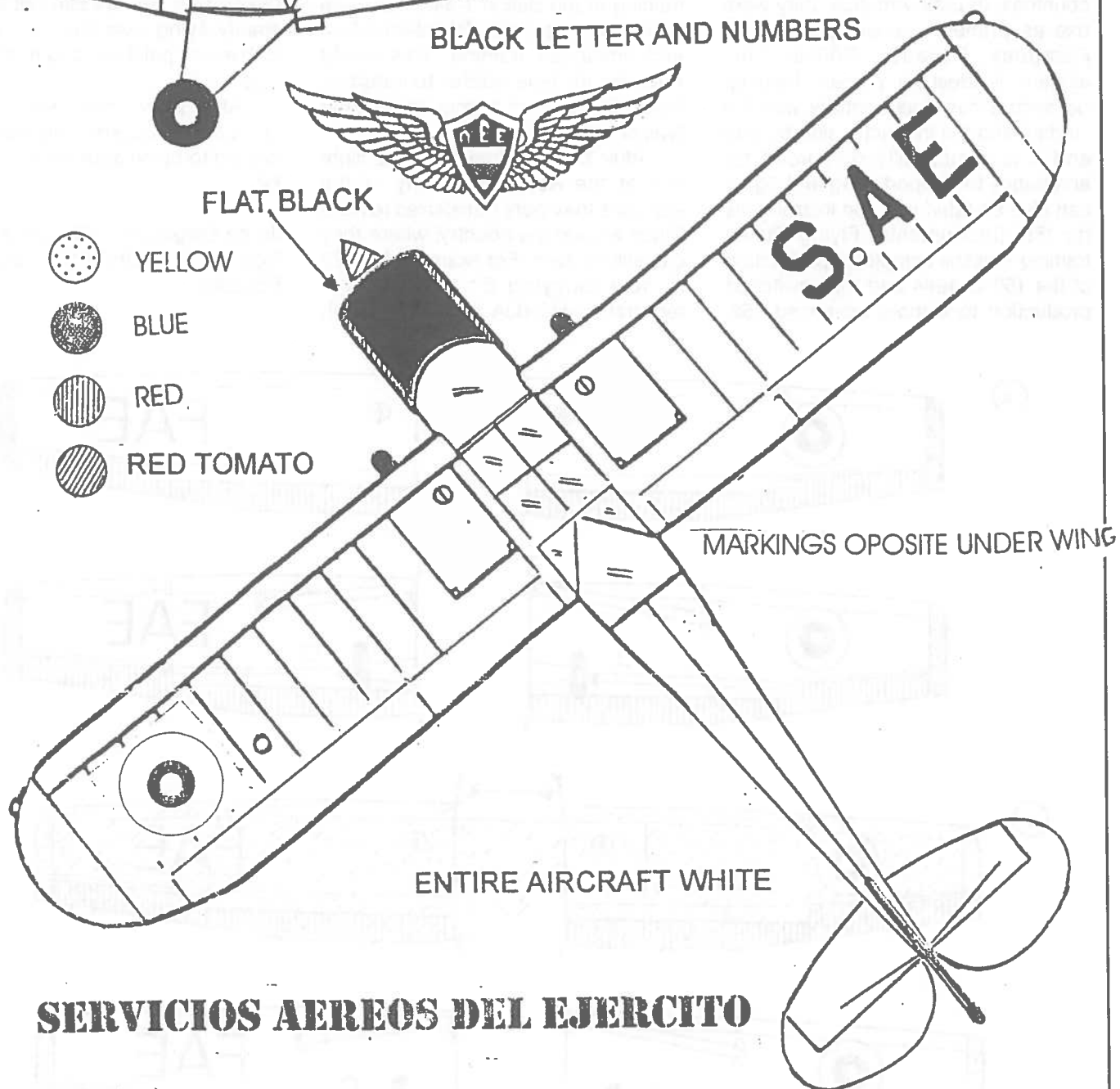
BLUE



RED



RED TOMATO



MARKINGS OPOSITE UNDER WING

ENTIRE AIRCRAFT WHITE

SERVICIOS AEREOS DEL EJERCITO

Cessna 150L Aerobat of the Fuerza Aerea Ecuatoriana

Jorge Delgado

In 1974, when the Ecuadoran Air Force entered into the supersonic era with the acquisition of the SEPECAT Jaguar International, the structure of pilot training had to be radically changed. The Air Academy obtained twenty Cessna 150L Aerobats, which were assigned serials TP-501 to TP-520 (TP for Primary Trainer).

The Aerobat was designed in 1958 and a total of 23,836 were built by the factory and under licenses in other countries. In Latin America, they were used as primary trainers by Mexico, Paraguay, Ecuador, Bolivia. This airplane is ideal for primary training, because it has dual controls with the student and the instructor side by side and it is structurally reinforced for acrobatics to support +5g and 3g. It can also be fitted with the instruments for IFR (Instrumental Flying Rules) training. Cessna completed production of the 150 in 1984 and then switched production to a more advanced 152.

Since then, Cessna has not designed any other aircraft for school use. However, there are many 150/152 in use worldwide and they will continue training new pilots for military and civil aviation for many years to come.

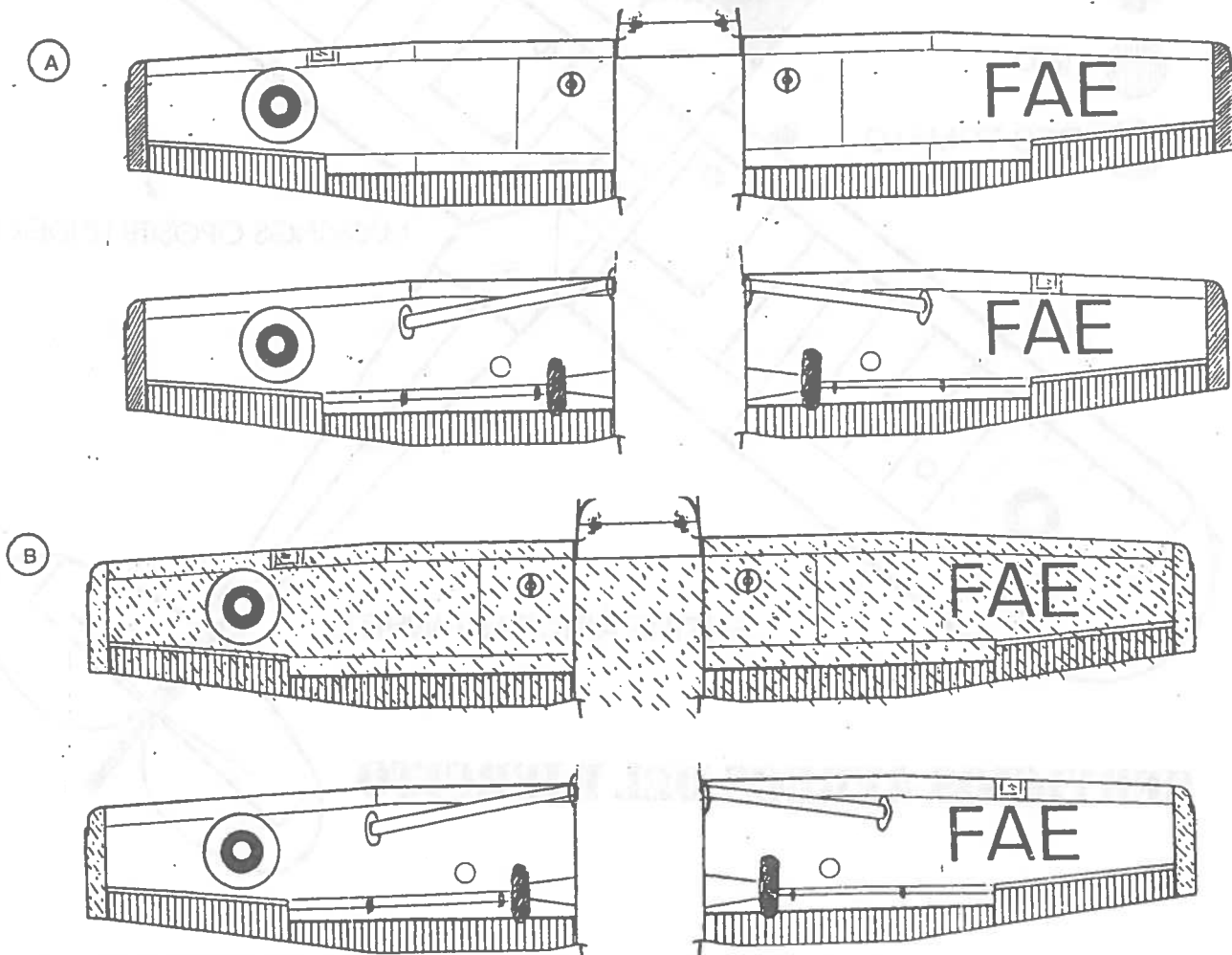
About the time when the Ecuadoran 150s began to show signs of wear because of their intense use at the Air Academy, the High Command decided that it would be a good opportunity for new cadets to begin their training in the Beech T-34C that were previously used only for intermediate and advanced training. This would eliminate the time needed to transition from one type of trainer to another type of trainer.

After being retired from the flight line at the Academy, many of the Aerobats they were transferred to Aero Clubs around the country, where they can still be seen. For example, TP-520 is now carrying Ecuadoran civil registration HC-BJA while flying with

the Aero Club del Ecuador. Others were assigned to the Ala de Combate 22, with headquarters in Guayaquil, where they operated with the squadron's helicopters in the SAR role. However, after several years, these Aerobats were returned to the Air Academy. Three other Aerobats were assigned to the Escuela de Aviacion Guayaquil. However, they were not used and were completely overhauled and given their old military numbers. At the present time we can see them constantly flying over the city of Salinas with a new paint job and military markings.

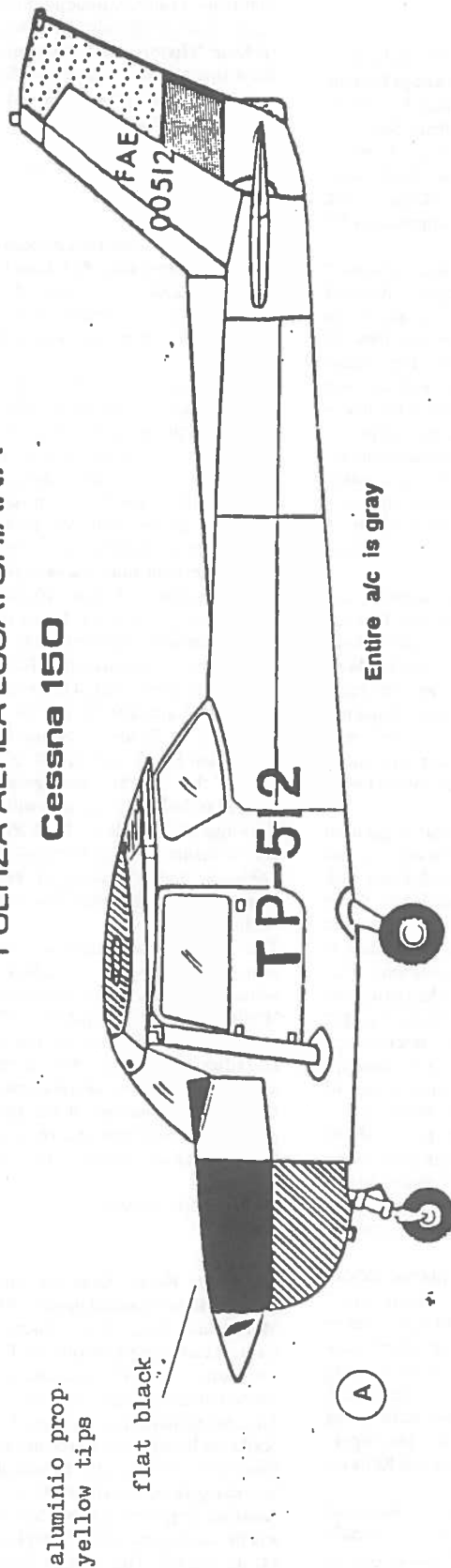
After more than twenty years of service, the Cessna 150 Aerobat has proved to be an airplane that is hard to kill.

Jorge Delgado P. (SAFCH #862), PO Box 2207 - URDESA, Guayaquil, Ecuador.



FUERZA AEREA ECUATORIANA

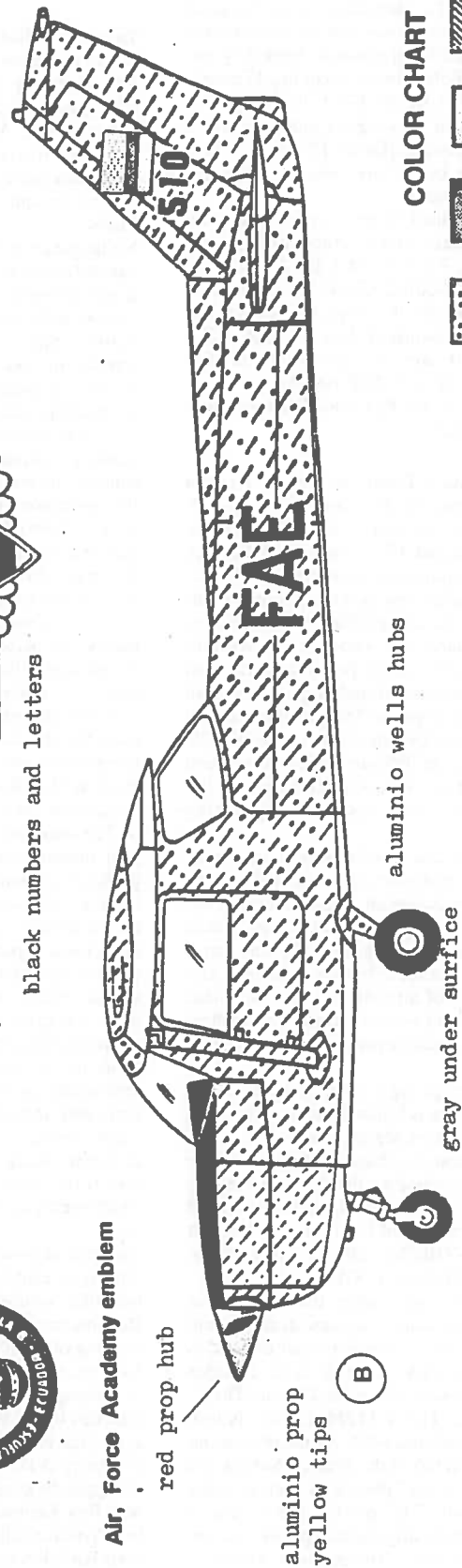
Cessna 150



black numbers and letters



Air, Force Academy emblem



COLOR CHART

	yellow		blue		red		orange		green
--	--------	--	------	--	-----	--	--------	--	-------

Cap. Jorge A. Delgado P.

Enciclopedia de la Aviacion Militar Espanola. Quiron Ediciones, C/Cromo P. 18-20 Poligono Industrial San Cristobal 47012 Valladolid, Espana. E-mail: quiron@quironediciones.com. Web site: www.quironediciones.com.

#41 The series "La Heraldica en la Aviacion Militar Espanola" continues with the presentation of the unit and individual emblems carried by current Spanish Air Force aircraft including 17 photos (F-86, F-104, Do-27, KC-97, F-4, F-18, Mirage F-1, and DC-3), 31 color drawings of emblems, and 5 color side-view drawings [Do 27, EF-18(3), & HA-200]. The poster inserts are: Sikorsky S.55 and Breguet XIX TR Bidon.

#42 The series on the emblems carried on current Spanish Air Force aircraft continues with 32 photos (HA-200, HU-16, P-3, F-86, O-1, Do 27, F-5, HA-200, C-47, CASA C-207, CASA C-235, Caribou, & CASA C-212), 34 color drawings of emblems, and 2 color side-view drawings (F-18A & CASA C-235). The poster inserts are: Hispano Aviacion HA-1.112 MIL "Buchon" and MBB BK 117.

Review copies provided by Carlos Fresno Crespo of Quiron Ediciones.

Aire, Agua, Arena y Fuego, by Emilio Herrera Alonso. Cuadernos de Historia Militar No. 1. Quiron Ediciones, C/Cromo P. 18-20 Poligono Industrial San Cristobal 47012 Valladolid, Espana. E-mail: quiron@quironediciones.com. Web site: www.quironediciones.com. A-4 size, 80 pages, soft cover, maps, photos, color profiles, index. 11 Euros. The Spanish Sahara, now known as the Western Sahara, is a land of vast deserts with an occasional oasis. It hardly seems worth fighting over. Spanish domination, which began in 1524, continued until the area was annexed by Morocco between 1976-79. Guerrilla war by the Polisario Front continued until a cease fire in 1991. A referendum on the status of the territory has been repeatedly postponed.

This book, whose title translates as "Air, Water, Sand and Fire", describes the activities of the Spanish Air Force during an all-out campaign between March 1956 and March 1958. The text is entirely in Spanish, but is supported by nine maps, 86 photos, and 16 color side-view drawings. The photos are mostly of aircraft, but with sufficient number of photos of vehicles, forts, and endless desert to make the reader run out for a cold drink of water.

The first chapter, giving a brief geography and history of the region, is followed by an interesting chapter on "La Aviacion Militar en el A.O.E." (The A.O.E "Africa Occidental Espanola" appears to be the official Spanish name for the Western Sahara.) Aircraft covered in this section include photos and color side-view drawings of DeH DH-9A, Breguet XIV, Fokker F-VIIb/3m, DH-82 Tiger Moth, Breguet XIX, and Fokker F-XII.

The remaining 59 pages cover the activities of 1950s. A list of the color side-view drawings will serve to illustrate the variety of aircraft covered in text and photos: CASA 2.111 (2), Ju 52, Douglas C-47, Grumman SA-16 Albatross, Dornier Do 27, Sikorsky H-19B, HA-1.112MIL (2), North American T-6D, and Aisa I-115. All the photos and drawings are of aircraft in the Spanish Sahara and not just "representative" photos as seen in some other publications. The photos are excellent reproduced on high quality of glossy paper, and are, with few exceptions, new to this reviewer. The color side-view drawings are of the highest quality.

Only the lack of an English text prevents me from

giving this book the highest recommendation. Nevertheless, it should appeal to anyone interested in Spanish aviation and/or in small air wars. Review copy provided by Carlos Fresno Crespo of Quiron Ediciones.

Tupoliev SB Katiuska en Espana (Vol. I), by Jesus Salas Larrazabal and Rafael de Madariaga Fernandez. Historica 36/39 No. 2. Quiron Ediciones, C/Cromo P. 18-20 Poligono Industrial San Cristobal 47012 Valladolid, Espana. E-mail: quiron@quironediciones.com. Web site: www.quironediciones.com. A-4 size, 80 pages, soft cover, maps, photos, color profiles, appendices. 9.5 Euros.

No language difficulties here; the text consists of parallel columns in Spanish and English. This book is not primarily about the SB-2, but about the people, both Spaniards and Russian who flew the 'Katis' in Spain. The author explains: "The characteristics of these light bombers as well as their operational philosophy have been widely dealt with in several publications. Here we bring examples of all this, sometimes summarizing and sometime expanding different aspects. But our intention was to concentrate on the personal and human aspects of the operations of the Katiuska units which, in general, have not been duly treated, both in extension and depth."

While the author succeeds in this endeavor, this book is not an easy read for he assumes that the reader has extensive knowledge of the events, places, and personalities of the Spanish Civil War. People and offensive are described without mentioning to which side they refer. A map of Spain is included showing the main cities and the front lines, but the date is not indicated and, to confuse things more, the Balearic Islands are shown incorrectly as "Territorio Republicano".

In addition, the author's style takes time to get used to. The main text is fairly easy to follow as it consists of a summary of operations (in black font) with personal accounts inserted (in red font). Some raids are reported from both the Republican and the Nationalist viewpoint; given the propaganda at time, these reports can be entirely different. The parts of the text most difficult to get used to are the author 'Inserts' with black and red fonts on a light blue background. These inserts occupy approximately half the text and are intimate descriptions of the personalities and experiences of individuals involved in the events. While this is extremely interesting, some times this leads to events being described from two or even three different points of view at different places in the text. If the reader is not paying close attention to which events are being described, it can be confusing.

The text is complemented by 40 photos (about equally divided between personnel and aircraft), 7 beautiful color side-view drawings of Katiuskas in Republican colors, and a magnificent color 5-view drawing of 'BK-07'. However, none of the drawing have any information about the aircraft portrayed. A full-page color painting shows two Katis being attacked by a CR.32; I've assume that this represents Garcia Morato's shooting down two Katis on 3 January 1937.

An appendix gives short biographies of all Russians who flew Katiuskas in Spain. A second appendix lists Aviacion Militar/Aeronautica Naval ranks and their RAF/RN equivalents.

The first time I read this book I was very disappointed. However, when I read it more slowly a

second time, I came away with a much better impression. There is a lot of great information here if the reader has patience. The insights into person, both Spanish and Russian, add flesh to the bones of history. I can recommend this book to all serious students of the Spanish Civil War.

[Editor: "Historica 36/39" is available for 9.5 Euros for a single issue or 32 Euros for four issues plus postage. In Europe add 1.8 and 7.2 Euros respectively for postage. In America add 3.6 and 14.4 Euros respectively.]

Review copy provided by Carlos Fresno Crespo of Quiron Ediciones.

Stalingrad: Les combats aeriens de la reconquete. Batailles Aeriennes #21. Lala Presse, 29 rue Paul Bert, 62230 Outreau, France. E-mail: lela.presse@wanadoo.fr. A-4, 80 pages, maps, photos, color drawings, 3-view scale drawings. 11 Euros.

This is another excellent volume in Michel Ledet's Batailles Aeriennes series. The first 50 pages are devoted to the aerial activities of the Luftwaffe and the Soviet Air Force in and around Stalingrad during Soviet counter attack. There are lots of excellently-reproduced photos of men and machines in the cold and snow. The remaining pages include extensive sections on the participation by German allies: Italian (10 pages, 24 photos) and Romanian (13 pages, 16 photos, 3 color side-view drawings). [Editor: In the background of one of the photos is a Romanian Me 108; this is the first time I've seen this aircraft in Romanian markings.] Altogether there are 124 photos, 17 color side-view drawings [Luftwaffe Bf 110, Bf 109G, Ju 87D, He 111H (2), Ju 52/3m (3); Soviet Yak-1 (2), Il-2 (3); Romanian He 111H, IAR 39 (2), Savoia JIS 79B]. One of the "Finches monographiques" cover the IAR 37 to IAR 39 in 4 pages with 1/72-scale 3-view drawings of the IAR 37, 38, & 39. The other covers the Ilyushin Il-2 Chetourmovik in 3 pages with a 1/90-scale 3-view drawing of the IL-2 AM-38 version 1941 and 5 side-view drawings of other 1941/42 versions.

The "Uniformes & Tenues se Vol" fills 2 pages with nine color drawings of Italian aviators in their winter uniforms. The model section describes the "Petlyakov Pe-2: Maquette MPM au 1/48" in 3 pages including 5 photos of the completed model. Batailles Aeriennes #21 is recommended to anyone interested in aerial combat on the Eastern Front. The enthusiast of the small air forces will particularly welcome the coverage of the Italian and Romanian contributions to the Battle of Stalingrad.

Review copy provided by Michel Ledet of Lala Presse.

LeR 4, by Kalevi Keskinen and Kari Stenman. Suomen Ilmavoimien Historia #19. Kari Stenman, Maininkitie 14A, 02320 Espoo, Finland. E-mail: kari.stenman@kolumbus.fi. Web site: www.kolumbus.fi/kari.stenman. 144 pages, soft cover, color drawings, scale drawings, appendices. This, the third in Keskinen and Stenman's series of books on Finnish Air Force units, the authors turn there their attention to the less glamorous, but no less dangerous, activities of the bomber units of Aviation Regiment 4 (Lentorykmentti 4 - LeR 4) and its component squadrons (Lentolaivue LLv42, 44, 46, and 48). This volume follows the same format and excellent quality of the previous two volumes. As usual, the book is dominated by large, excellently-reproduced photos of Finnish bombers

filling almost every page. Here you will find photos of Blenheims (both short and long nose versions), Junkers 88s, Dornier 17Zs, captured Soviet bombers (Pe-2, DB-3, Il-4), and many of the auxiliary aircraft found hanging around bomber bases.

I am continually amazed by the number of photos in Finland of operational aircraft. It seems that every Finn had a camera and that photography was openly permitted at even forward operational bases. Imagine what we would have if such a policy was allowed in the West.

There are a total of 225 b&w photos and 4 color photos. The informative photo captions are in both Finnish and English. The main body of text is in Finnish, but there is a nine-page English summary that appears to be very comprehensive. Of particular interest to this reviewer is the section on the Lapland War during which one Finnish Junkers (JK-256) was shot down by a Bf 109 G-6 of 9/JG5. Three other Finnish bombers were lost to anti-aircraft fire: JK-263, BL-156, and DB-16.

There are 24 color side-view drawings [Blenheim I (5), Blenheim IV (4), DB-3M (3), IL-4, Pe-2 (2) Do 17Z (3), Ju 88A (6)] as well as scale side-view drawings of the Blenheim I & IV, Anson, DB-3M, Il-4, Do 17Z, and Ju 88A. The appendices list wartime commanders, operational losses, regiment missions, aerial victories and the serviceable warplanes on hand by unit and type quarterly from 1940 to 1944.

Modelers will find much in book that will help them to add interesting touches to a model of a Finnish bomber. For examples: parked Blenheims always had their elevators dropped and parked Junkers and Dorniers always had their crew-entrance ladders deployed. Interesting accessories that will add life to any model are the bombs and bomb trolleys, maintenance platforms, a towing tractor, and, most interesting of all and easy to scratch build, the heater units used to warm up the engines on a cold winter day.

LeR 4 is another excellent book from Keskinen and Stenman that can be highly recommended to anyone interested in the Finnish Air Force, WWII on the Eastern Front, or anyone just interested in excellent photographs of aircraft in their operational environment.

Review copy from by the author.

Aviation History Colouring Book, Ian K. Baker, 31A Mercer St., Queenscliff, VIC, 3225 Australia. Ian Baker has three volumes of his unfortunately-named "colouring books" that are reprints of the out-of-print first 25 volumes. Let Ian explain it in

his usual honest and straightforward manner: "Between 1993 and 1995, twenty-five mini-monographs were created. This was where AHCB began. They have been out of print for quite a few years, and anyway they were only ever made in very short runs and acquired by a small circle of enthusiasts. So it has recently been suggested to me, more than once, that a reprint was rather overdue. Now, finally, that has been done. This reprint comes in three booklets, two with 36 pages and the third with 32. All the mini-monographs have been reproduced exactly as they originally appeared, except that they do not contain the individual colour chips founding the originals. Those were subsequently re-issued, several of them twice, anyway. In their place, notes have been added advising where further information, and a couple of corrections, have subsequently appeared in more recent issues of AHCB. There was a quantity of useful colours and markings information, drawings and diagrams, much of it relating to specific aircraft types, packed in those early AHCBs. For those who missed out on numbers 1 to 25 when they first appeared, this reprint provides a last chance to acquire them. When these three limited editions, each of 400, are gone, that's it. There shall be no future re-runs."

These reprints are A-4 size saddle-stapled between sturdy covers. Sturdy covers are necessary since these booklets will see a lot of hard use by modelers adding RAAF aircraft to their collections. The quality of the information and the drawings set the high standard for accuracy that Ian has continued in all later volumes of this series. All re-printed mini-monographs consist of 4 pages with an informative text, one photo, and a number of side-view drawings and top and bottom plan-views when appropriate. Let's see what's in each re-printed volume:

#47 Re-print of #1 to 9. (1) "Westland Wapiti in the RAAF". (2) "Bristol Bulldog in the RAAF". (3) "Hawker Demon in the RAAF". (4) "RAAF Roundels, Tail Stripes & other Markings Pt. 1". (5) "RAAF Roundels, Tail Stripes & other Markings Pt. 2". (6) "Commonwealth Aircraft Corporation Camouflage Patterns". (7) "CAC Wirraway Pt. 1". (8) "CAC Wirraway Pt. 2". (9) "CAC Wirraway Pt. 3".

#48 Re-print of #10 to 18. (10) "CAC Boomerang Pt. 1". (11) "CAC Boomerang Pt. 2". (12) "Avro Anson in the RAAF Pt. 1". (13) "Avro Anson in the RAAF Pt. 2". (14) "Bristol/DAP Beaufort Pt. 1". (15) "Bristol/DAP Beaufort Pt. 2". (16) "Curtiss P-40 Kittyhawk in the RAAF Pt. 1". (17) "Curtiss

P-40 Kittyhawk in the RAAF Pt. 2". (18) "Vickers-Supermarine Spitfire in the RAAF Pt. 1".

#49 Re-print of #19 to 25. (20) "Consolidated Catalina". (21) "Dornier Do.24". (22) "Douglas DC2, DC3 & Dakota in the RAAF". (23) "Vultee Vengeance in the RAAF". (24) "Bristol & DAP Beaufighter in the RAAF". (25) "DeHavilland Mosquito in the RAAF".

If you're a modeler planning to add a few models of RAAF aircraft to your collections, then these re-prints are a must. Everyone else should consider obtaining these just for the sheer joy of having them in their library.

AHCB are available from M&M Models (Illinois) in the USA and Mushroom Model Publications in the UK and Europe. Also mail order to anywhere direct from the publisher at the address above.

Review copies provided by the author.

Embraer 326GB Xavante AT-23, by Aparecido Camazano Alamino and Rudnei Dias da Cunha. Aeronaves Militares Brasileiras #1. Aeronaves Militares Brasileiras, C.P. 9586, A/C Moinhos de Vento, Porto Alegre - RS, 90441-970 Brasil.

The text of this 56-page, A-4 size softbound book is entirely in Portuguese, but the photos, drawings, and tables are self-explanatory. The book is printed on high-quality glossy paper so the reproduction of the photos, all of Brazilian-built 326s, is excellent. There are 5 b&w photos (3 Brazil, one Paraguay, and one Togo; Togo received 6 and Paraguay received 10 Brazilian-built Xavantes), 28 color photos of Xavantes in Brazilian markings, and 15 color photos of Brazilian Xavante tail markings. I'm surprised by the variation in color from photo to photo; this is apparently not because of the reproduction process, but seems to be inherent in the original photos, something to do with the bright Brazilian sun or the quality of color film available in Brazil? There are 27 color side-view drawings, all of Brazilian Xavantes, and one color top-view drawing. These color drawings are rather "flat", but they do show the camouflage pattern and the placement of special markings rather well. The book finishes with a 7-page table listing the FAB serial, construction number, date received, date written off, and "remarks" for all individual BAF Xavantes.

This is a useful book for anyone building a model of an MB-326 in Brazilian markings and an important document to be added to the library of any enthusiast able to read Portuguese.



SUOMEN ILMAVOIMIEN HISTORIA 19

LeR 4



US Jets in Yugoslav Air Force, T-33A, F-84G, F-88E(M), F-86D. 1/48-scale decals. Flightdecs, 244Masters St., Thunder Bay, Ontario P7B 6L5, Canada. E-mail: fldecs@tbaytel.net. Web site: www.tbaytel.net/fldecs. US \$8.50.

This neat little (155 mm by 95 mm) decal sheet provides the squadron emblems, serial numbers, buzz numbers, and individual markings for seven aircraft: Lockheed T-33A (2), Republic F-84G (2) Canadair F-86E, and two North American F-86D. Unfortunately, national roundels and fin flashes are provided for one aircraft, but it shouldn't be too difficult to find these if you want to build a model of more than one of these aircraft.) The decals are superbly produced in perfect register with the printing so sharp that the smallest detail is clear. In an excellent example of international cooperation, the artwork was done by LIFT HERE! Decals of Yugoslavia.

The full-color instruction sheet is outstanding. Each aircraft is shown in side view (port and starboard for camouflaged aircraft) and in top and bottom plan views. The Sabre is in natural metal with only a squadron emblem (shark) providing any color. The Dog Sabers are also in natural metal, but one has an extensive area of blue on the forward part of the fuselage and a white shark-mouth decoration. One of the straight-wing Thunderjets is in a camouflage scheme of Dark Grey (FS-36152) and Olive Green (FS-34102) top sides and PRU Blue 9FS-35164) undersides. The other F-84 is in natural metal with the wingtip tanks, ailerons, and the entire aircraft aft of the fuselage insignia in Arctic Red (FS-31136). One of the T-33s is in a color scheme similar to the natural metal F-84, but the other has the entire undersurfaces, the lower half of the fuselage, wide bands on the upper surface of the wings, and a fuselage band on Trainer Yellow (FS-33538); the lower surfaces also carry broad Black bands characteristic of a target towing aircraft.

These excellent decals provide the opportunity for the quarter-scale modeler to add some unusual and colorful Yugoslav aircraft to a collection of small-air-force aircraft. They are highly recommended. This is the first in the Flightdecs series. Future releases will be in both 1/48 and 1/72 scale.

Review decals provided by Jim Lzyun of Flightdecs.

DIIC-2 Beaver Part 1. 1/48-scale decals. Max Decals 4808. Max Decals, 67 Skreen Road, Navan Road, Dublin 7, Ireland. E-mail: maxdecals@oceanfree.net. Web site: www.maxdecals.com.

These decals are the second in Joe Maxwell's Antarctic Aviation series and the first of two parts in 1/48 scale on the DHC-2 Beaver in the Antarctic. This first sheet contains decals for four Beavers: (1) RAAF A95-201 of the Australian National Antarctic Research Expedition (ANARE) 1956-57 in overall gloss orange with black cheatline and boxing kangaroo national insignia on the fuselage and standard roundels in four wing positions. (2) RAAF A95-205 1962 (on floats) in overall orange with a large ANARE badge on both sides of the fuselage and standard kangaroo national insignia in the usual six positions. (3) RNZAF NZ6001 Antarctic Flight 1957-58 in overall bright red-orange. (4) Chilean Air Force 907 1961 on floats in overall natural metal with dayglo orange panels. The large (145 mm by 200 mm) decal sheet provides all the markings required and is well printed in perfect registration. (An additional 145 mm by 40mm sheet provides additional RAAF roundels.)

The instruction sheet contains side- and top-view drawings of all aircraft showing the colors and placement of all markings.

This sheet is highly recommended for anyone interested in building one (or more) 1/48-scale Beavers in some bright colors.

Review decals provided by Joe Maxwell of Max Decals.

DHC-2 Beaver Part 2. 1/48-scale decals. Max Decals 4809. Max Decals, 67 Skreen Road, Navan Road, Dublin 7, Ireland. E-mail: maxdecals@oceanfree.net. Web site: www.maxdecals.com.

This sheet, in the usually Max style (see review above), provides makings for six Beavers, only two of which are Antarctic Beavers. But, these two are of particular interest to SAFO readers. (1) Argentine Navy IAA-101 mid-1960s in overall gloss red with blue/white/blue rudder and elevator. (2) Argentine Air Force P-03 or P-05 in overall bright gloss red with Argentine flag on the fin and blue/white/blue elevator. The other four Beavers are US birds (pardon the mixture of animals): (1) 52-6138 USAF 78th. FBW Woodbridge Suffolk, May 1957, in overall natural metal with red checker cowl and large unit badge. (2) 52-6102, Detachment 35, Central Air Rescue Center, Goodfellow AFB, Texas, July 1964 in overall natural metal. (3) 50-26105, Alaskan Air Command, Elmendorf AB, Alaska, 1964, in natural metal with gloss black lower fuselage and dayglo red tail feathers. (4) 150191 US Navy Test Pilot School, NAS Patuxent River, with the choice of 1966, 1973, or late 80s color scheme (mostly light grey with International Orange panels).

The decals and instruction sheet are up to the usual high Max quality and completeness. This sheet can be highly recommended, particularly for the Argentine subjects.

Review decals provided by Joe Maxwell of Max Decals.

DIIC-2 Beaver. 1/72-scale decals. Max Decals 7208. Max Decals, 67 Skreen Road, Navan Road, Dublin 7, Ireland. E-mail: maxdecals@oceanfree.net. Web site: www.maxdecals.com.

This 1/72-scale sheet contains decals for all the subjects on the two 1/48-scale sheets reviewed above with the following exception: RAAF 95-202 of the ANARE in overall gloss orange with dayglo red panels replaces the Navy Beavers of sheet 4809. This sheet can be highly recommended to all small-air-force modelers working in 1/72-scale. The two Argentine aircraft and the Chilean aircraft are particularly attractive, and the RAAF Beaver with the boxing kangaroo will be hard to resist.

Color versions of all Max instruction sheets are available on the Max Decals web site.

Review decals provided by Joe Maxwell of Max Decals.

Lockheed Model 14 Hudson/Super Electra. 1/48-scale decals. Max Decals 4810. Max Decals, 67 Skreen Road, Navan Road, Dublin 7, Ireland. E-mail: maxdecals@oceanfree.net. Web site: www.maxdecals.com.

This is another excellent decal 1/48-scale sheet from Max Decals. The subjects are four Lockheed Hudsons: (1) Irish Air Corps #91, 1941. This was an interned aircraft in standard RAF bomber camouflage of dark earth/dark green with matt black undersides. Two-color (orange/green) Irish roundels on a white square are carried on the

fuselage and the Irish tricolor (orange/white/green) stripes are carried near the tips of the wing on the lower surface. (2) Aer Lingus EI-ABW in overall natural metal in June 1939, and, after the start of the war, in dark green/dark earth camouflage with neutrality-orange undersurfaces and the Irish flag on the fuselage. (3) When EI-ABW was sold to Guinea Airways in May 1940, it took up Australian registration VH-ADY and was camouflaged in dark earth/dark green camouflage with light grey or natural metal undersurfaces. (4) RNZAF NZ2063, Wigram, 1948, in Air Sea Rescue markings of overall natural metal with orange-yellow cowlings and fuselage band. The ASR badge on the fuselage consists of a yellow cross on a black disc. Fuselage antenna and a nose mounted Yagi antenna were fitted.

This is another interesting sheet from Max Decals. The quality and completeness of the decals and instructions are to the usual Max Decals standard as described above. The Irish AC and the RNZAF ASR aircraft should appeal to SAFO readers who are into quarter scale modeling.

Review decals provided by Joe Maxwell of Max Decals.

Fairey Firefly Mk I 860 Sqn., Firefly Mk I K-6 RNethNavy. 1/48-scale decals. Dutch Decals 48035. Dutch Decals, Kerkstraat 2, 2471 AP Zwammerdam, The Netherlands. E-mail: info@dutchdecals.demon.nl. Web site: www.dutchdecals.nl.

This set includes two decal sheets (200 mm by 75 mm and 95 mm by 75 mm) and provides making to make one of three different Fireflies and a Barracuda in Dutch service. The Firefly Mk 1s include two from 860 Sqn RNethNavy at Morokrembangan, Dutch East Indies, 1946-47 (F-4 and F-22): both aircraft are RAF roundels and are in Royal Navy camouflage, but carry small orange triangles under the cockpit. The other Firefly Mk I is 16-6 of 1 Sqn. RNethNavy at Valkenburg 1952. The Barracuda Mk III is ME105 of 860 Sqn. Royal Dutch Naval Air Service HMS Nairana 1945-46 and is also in RN colors and markings.

As with all Dutch Decals, the decals are excellently produced in perfect register and color, and the instruction sheets provides beautifully drawn side, top, and bottom views.

Review decals provided by Luc Boerman of Dutch Decals.

Lockheed Hudson 320 Dutch Sqn. RAF, Spitfire Mk V, XVI 167/322 Dutch Sqn. RAF. 1/48-scale decals. Dutch Decals 48036. Dutch Decals, Kerkstraat 2, 2471 AP Zwammerdam, The Netherlands. E-mail: info@dutchdecals.demon.nl. Web site: www.dutchdecals.nl.

This set is to the same size and high quality as described above, so there is no need to repeat that part of the review. Markings are provided to do one Hudson Mk II: NO-K T9381 of 320 Dutch Sqn RAF Leuchars 1941. The color scheme is standard for RAF bombers of the time. Markings are provided for 7 different Spitfires 322 Dutch Sqn: two Mk Vb from 1943 (VL code) and 5 Mk XVIe (bubble canopy) from 1945 (code 3W). Colors and insignia are standard RAF.

Review decals provided by Luc Boerman of Dutch Decals.

Firefly Mk I, Barracuda Mk III 860 Sqn. RNethNavy, Spitfire Mk.V IX, XVI Dutch Sqn. RAF. 1/72-scale decals. Dutch Decals 72056. Dutch Decals, Kerkstraat 2, 2471 AP Zwammerdam, The

Netherlands. E-mail: info@dutchdecals.demon.nl.
Web site: www.dutchdecals.nl.

Again the same size and high quality expected from Dutch Decals, but in the smaller scale many more schemes can be included. There are 4 Hudson to chose from, all from 320 Dutch Sqn in England 1940-42 (code 'NO') in standard bomber camouflage and roundels. The Anson Mk I was with 321 Royal Dutch Naval Service also in England 1940-41. The overall silver (with red cowls) Lockheed 12A Zuid Holland was in the Netherlands in 1946 (but still with RAF roundels).

Review decals provided by Luc Boerman of Dutch

Decals.

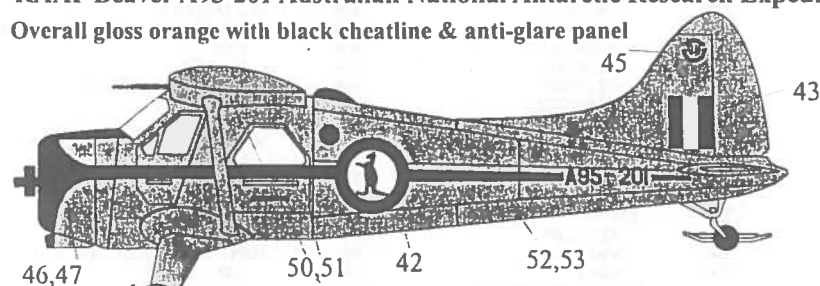
Lockheed Hudson 320 Dutch Sqn. RAF, Avro Anson 321 Dutch Sqn. RAF, Lockheed 12 LSK NF753; 1/72-scale decals. Dutch Decals 48035. Dutch Decals, Kerkstraat 2, 2471 AP Zwammerdam, The Netherlands. E-mail: info@dutchdecals.demon.nl. Web site: www.dutchdecals.nl. Again, the same size decal sheets, but this time carrying so many different schemes that three pages of drawings are required to cover all the schemes. All aircraft carry RAF roundels and RAF/RN color schemes. In all, there are decals for

2 Fireflies, one Barracuda, and 12 Spitfires of various Mk's including Vb, IX, and XVI. Included are all the aircraft described above for the 1/48-scale sets.

Don't let these brief reviews fool you. These are all excellent decals and can be highly recommended to anyone not reluctant to add more aircraft in RAF roundels to their collection they all carry small orange triangles. And, a Dutch Barracuda is they only small air force scheme available for this type. Review decals provided by Luc Boerman of Dutch Decals.

RAAF Beaver A95-201 Australian National Antarctic Research Expedition 1956-57.

Overall gloss orange with black cheatline & anti-glare panel



Paint front of cowl black

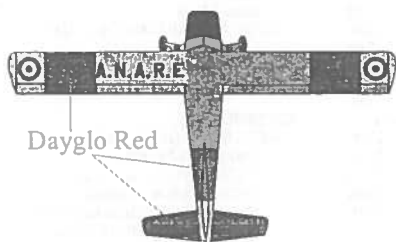


Kangaroos face outboard on upper and lower wings.

40, 41 A95-201 was destroyed in a blizzard in December 1959.

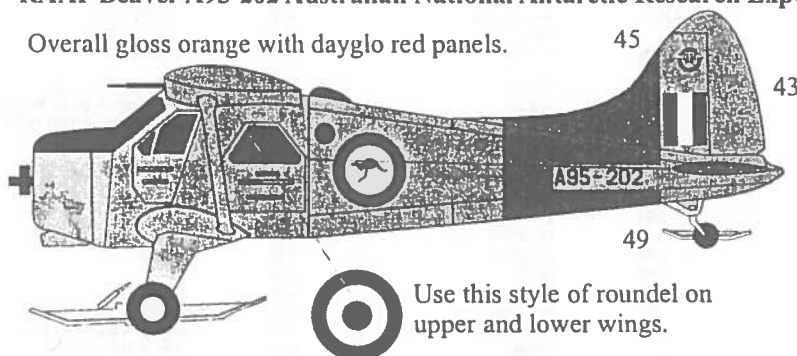
MAX DECALS Antarctic Aviation Series

Otter #7206
Beaver #7208



RAAF Beaver A95-202 Australian National Antarctic Research Expedition 1959-60.

Overall gloss orange with dayglo red panels.



Use this style of roundel on upper and lower wings.

These decals are available in both 1/72nd and 1/48th scale.

DHC-3 Otter Royal Norwegian AF circa 1968

Overall silver with dayglo orange trim

